HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

BA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-24FS100	*RM-Y173*	*US*	*SCC-S61D-A*
KV-24FS100	*RM-Y173*	*CND*	*SCC-S59D-A*
KV-25FS100	*RM-Y173*	*LATIN NORTH*	*SCC-S60J-A*
KV-25FS100	*RM-Y173*	*LATIN SOUTH*	*SCC-S60K-A*

ORIGINAL MANUAL ISSUE DATE: 5/2002

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
5/2002	No revisions or updates are applicable at this time	
9/2002	Correction -1	Added step #4 to 2-4. SCREEN (G2) instructions. Replaced A Board IC Voltage List.
4/2003	Correction -2	Replaced A Board Transistor Voltage List (Q600, Q601) (Page 33) Replaced A Board IC Voltage List (IC600) (Page 34).
11/2003	Correction -3	Replaced A Board Schematic to correct T603 PIN Connection (Page 31)

TRINITRON® COLOR TELEVISION

SONY®

9-965-928-04

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KV-24FS100

RM-Y173

TRINITRON® COLOR TELEVISION

SONY®

9-965-928-04

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SPECIFICATIONS

	KV-24FS100/ 25FS100 (N)	KV-25FS100 (S)
Power requirements	120V, 60Hz	220V, 50/60Hz
Number of Inputs/Outputs		
Video [1]	2	
S Video [2]	1	
Y, P_B, P_R [3]	1	
Audio [4]	4	
Speaker output (W)	7.5W x 2	
Headphones [5]	1	
Power Consumption (W)		
In use (Max)	145W	
In Standby	1W	
Dimensions(W/H/D)		
mm	704 x 524 x 474 mm	
in	**27 3/4 x 20 5/8 x 18 1/2**	
Mass		
kg	35 kg	
lbs	77 lbs. 3 oz.	

1) 1 Vp-p 75 ohms unbalanced, sync negative
2) Y: 1 Vp-p 75 ohms unbalanced, sync negative
   C: 0.286 Vp-p (Burst signal), 75 ohms
3) Y: 1.0 Vp-p, 75 ohms, sync negative; PB: 0.7 Vp-p, 75 ohms;
   PR Vp-p, 75 ohms.
4) 500 mVrms (100% modulation), Impedance: 47 kilohms
5) More than 408 mVrms at the maximum volume setting (variable)
   More than 408 mVrms (fix); Impedance (output): 2 kilohms

Television system
American TV Standard, NTSC

Channel coverage
VHF: 2-13/ UHF: 14-69/ CATV: 1-125

Picture tube
FD Trinitron® tube

Visible screen size
24 inch picture measured diagonally

Actual screen size
25 inch measured diagonally

Antenna
75 ohm external terminal for VHF/UHF

Supplied Accessories
Remote Commander:
RM-Y173
Size AA (R6) batteries (2)
Antenna, Telescopic
(KV-25FS100 ONLY)

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the AC power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

Apres avoir deconnecte le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au chassis metallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants Sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par Sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instructions.

2. A battery-operated AC milliampmeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson’s 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble- light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

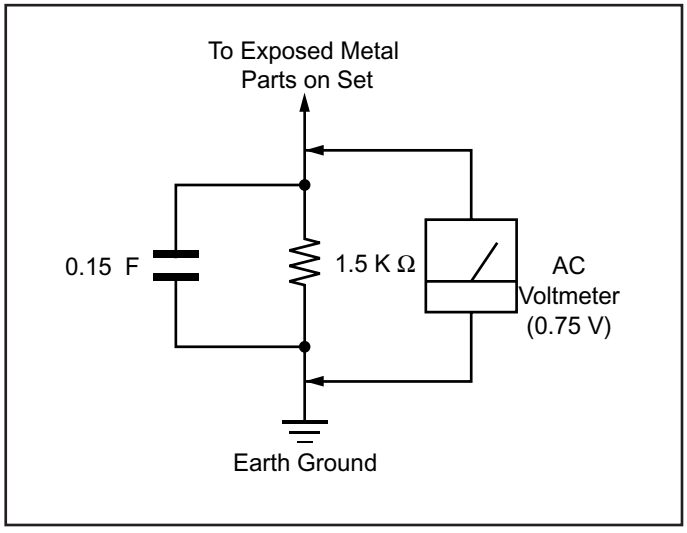


Figure A. Using an AC voltmeter to check AC leakage.

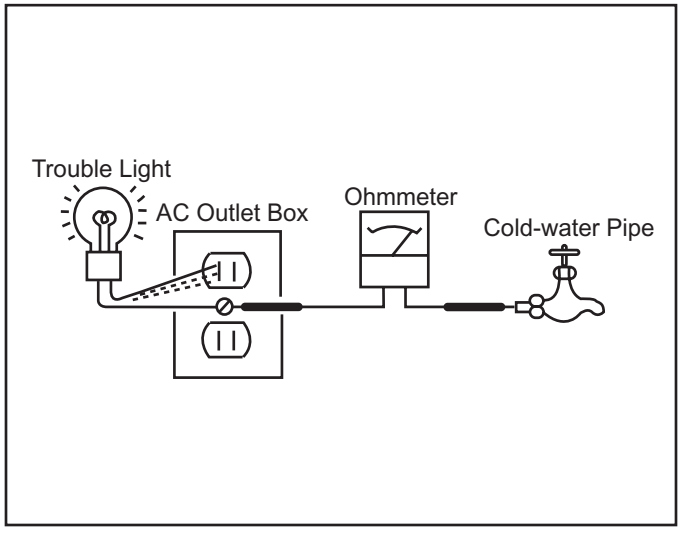


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION

Self Diagnosis Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

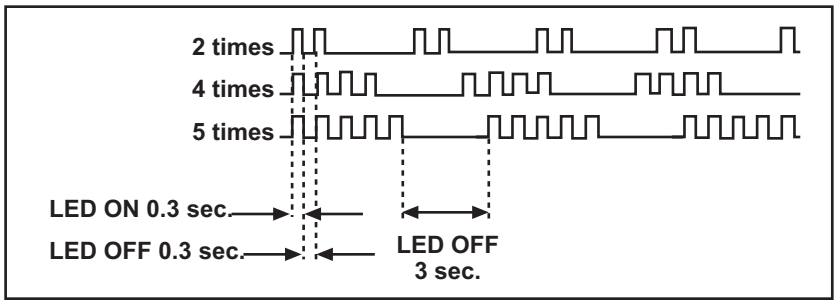
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

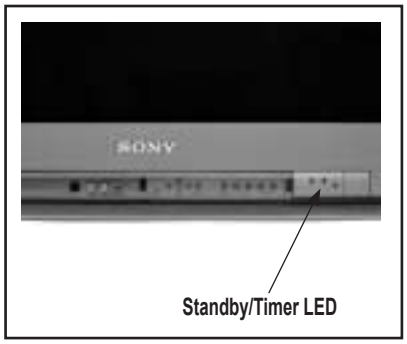
Diagnostic Item Description	No. of times STANDBY/ TIMER lamp flashes	Self-Diagnositc Display/ Diagnostic Result	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	————	• Power cord is not plugged in. • Fuse is burned out (F601). (A Board)	• Power does not come on. • No power is supplied to the TV. • AC Power supply is faulty.
+B overcurrent (OCP)*	2 times	2:0 or 2:1	• H.OUT (Q505) is shorted. (A Board) • IC1751 is shorted. (CV Board)	• Power does not come on. • Load on power line is shorted.
I-Prot	4 times	4:0 or 4:1	• +13V is not supplied. (A Board) • IC545 is faulty. (A Board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
IK (AKB)	5 times	5:0 or 5:1	• Viedo OUT (IC545) is faulty. (A Board) • IC001 is faulty. (A Board) • Screen (G2) is improperly adjusted.**	• No raster is generated. • CRT Cathode current detection reference pulse output is small.

*If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the mircrocontroller is displayed on the screen.

**Refer to Screen (G2) Adjustments in Section 2-4. of this manual.

Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B Overcurrent	2 times
I-Prot	4 times
IK (AKB)	5 times

*One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

Display ➡ Channel 5 ➡ Sound Volume - ➡ Power ON

⇧ Note that this differs from entering the Service Mode (Sound Volume +).

Self-Diagnostic Screen Display

SELF DIAGNOSTIC
2: 000
3: N/A
4: 000
5: 001
101: N/A

Numeral “0” means that no fault was detected.
Numeral “1” means a fault was detected one time only.

Handling of Self-Diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

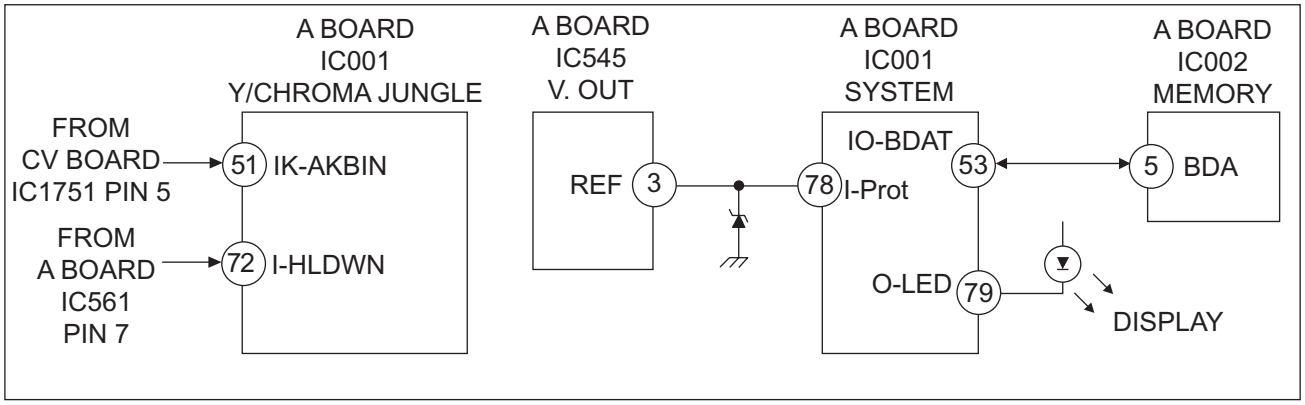
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel 8 ➡ ENTER

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-Diagnostic Circuit



+B overcurrent (OCP)

Occurs when an overcurrent on the +B (135V) line is detected by pin 72 of IC001 (A Board). If the voltage of pin 72 of IC001 (A Board) is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

I-Prot

Occurs when an absence of the vertical deflection pulse is detected by pin 78 of IC001 (A Board). Power supply will shut down when waveform interval exceeds 2 seconds.

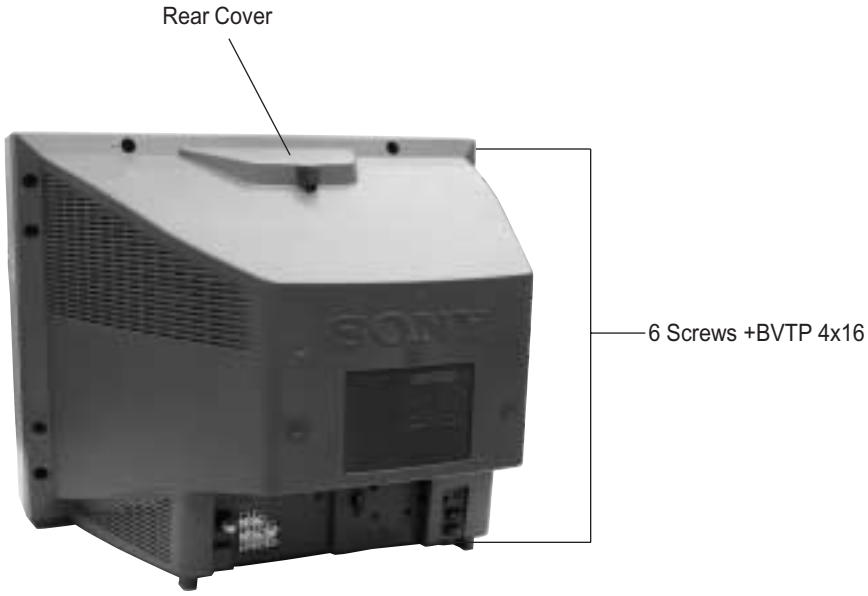
IK (AKB)

If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC001 (A Board). TV will stay on, but there will be no picture.

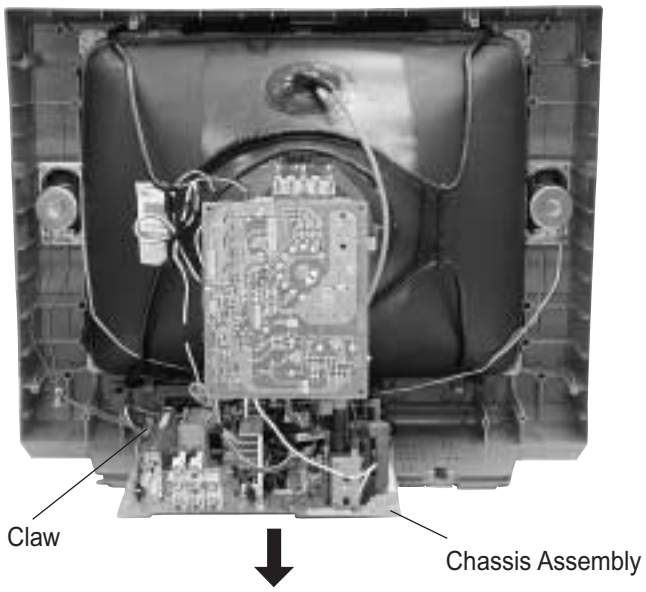
*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

SECTION 1: DISASSEMBLY

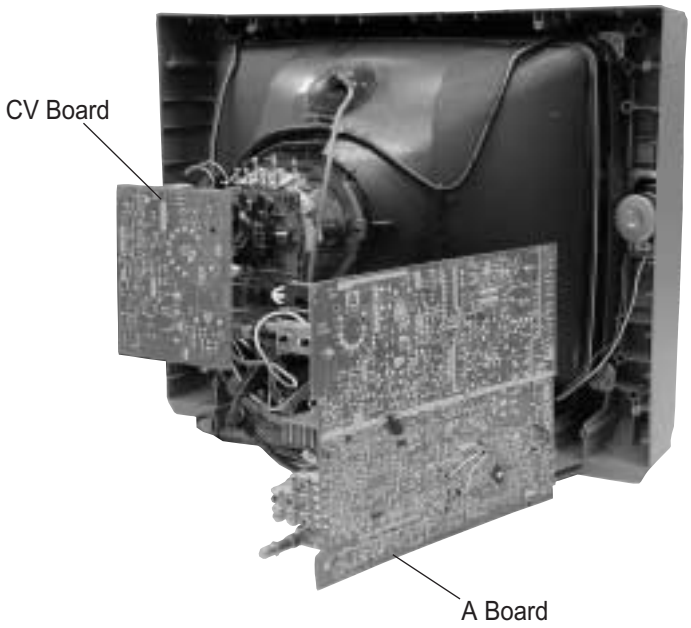
1-1. REAR COVER REMOVAL



1-2. CHASSIS ASSEMBLY REMOVAL

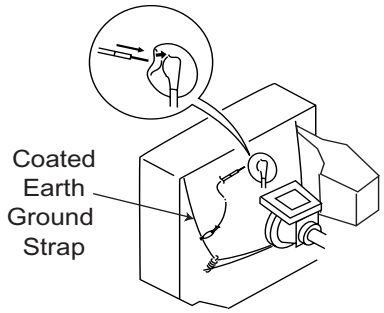


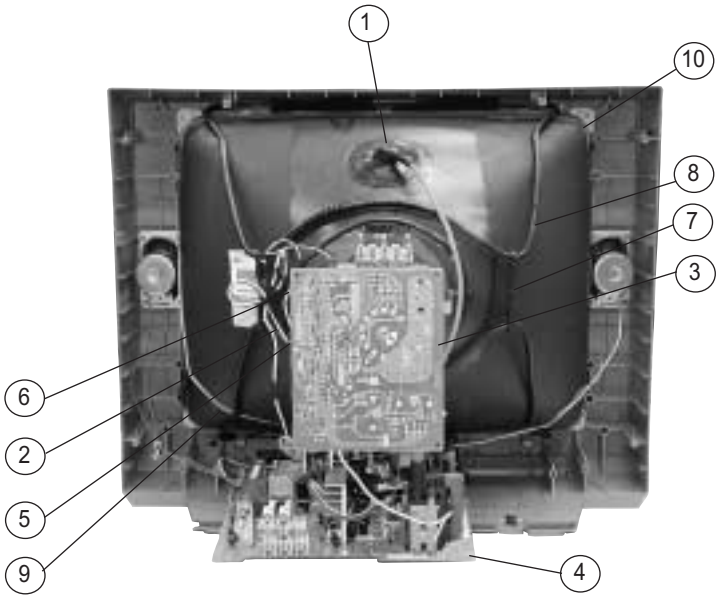
1-3. SERVICE POSITION



1-4. PICTURE TUBE REMOVAL

WARNING: BEFORE REMOVING THE ANODE CAP
High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT before attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

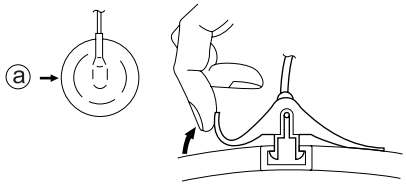




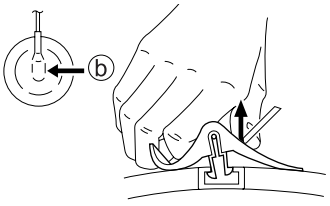
1. Discharge the anode of the CRT and remove the anode cap.
2. Unplug all interconnecting leads from the deflection yoke, neck assembly, degaussing coils and CRT grounding strap.
3. Remove the CV Board from the CRT.
4. Remove the chassis assembly.
5. Loosen the neck assembly fixing screw and remove.
6. Loosen the deflection yoke fixing screw and remove.
7. Place the set with the CRT face down on a cushion and remove the degaussing coil holders.
8. Remove the degaussing coils.
9. Remove the CRT grounding strap and spring tension devices.
10. Unscrew the four CRT fixing screws [located on each CRT corner] and remove the CRT [Take care not to handle the CRT by the neck].

ANODE CAP REMOVAL PROCEDURE

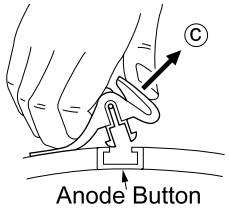
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.
NOTE: After removing the anode cap, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.



Turn up one side of the rubber cap in the direction indicated by arrow ⓐ .



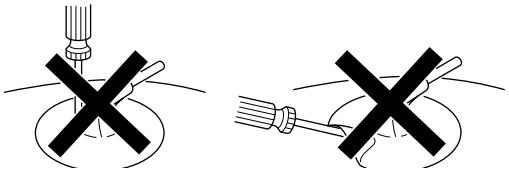
Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ .



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ .

HOW TO HANDLE AN ANODE CAP

1. Do not use sharp objects which may cause damage to the surface of the anode cap.
2. To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
3. Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 2: SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls as follows unless otherwise noted:
VIDEO MODE: Standard
PICTURE CONTROL: Normal
BRIGHTNESS CONTROL: Normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)
5. White Balance

Note Test Equipment Required:

1. Color Bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital Multimeter

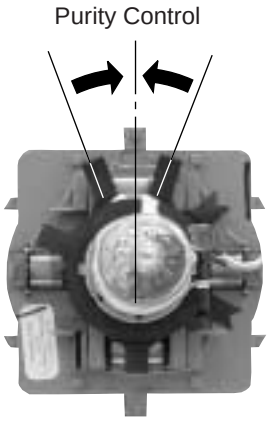
2-1. BEAM LANDING

Before beginning adjustment procedure:

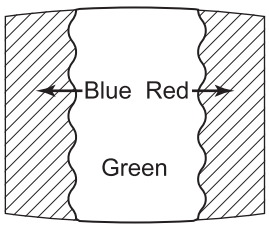
1. Degauss the entire screen.
2. Feed in the white pattern signal.

ADJUSTMENT PROCEDURE

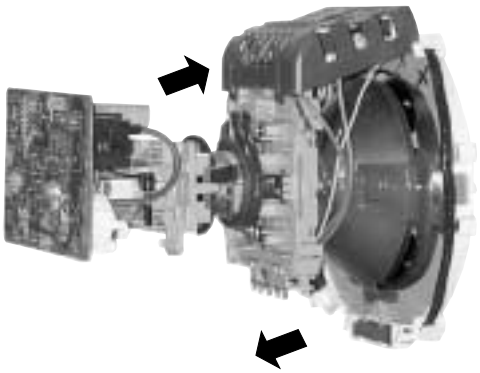
1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown below:

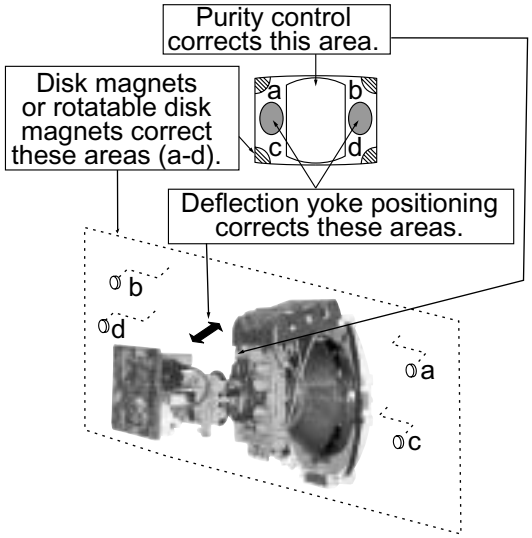


3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are even on both sides.



5. Move the deflection yoke forward, and adjust so that the entire screen becomes green.
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. If landing at the corner is not right, adjust by using the disk magnets.





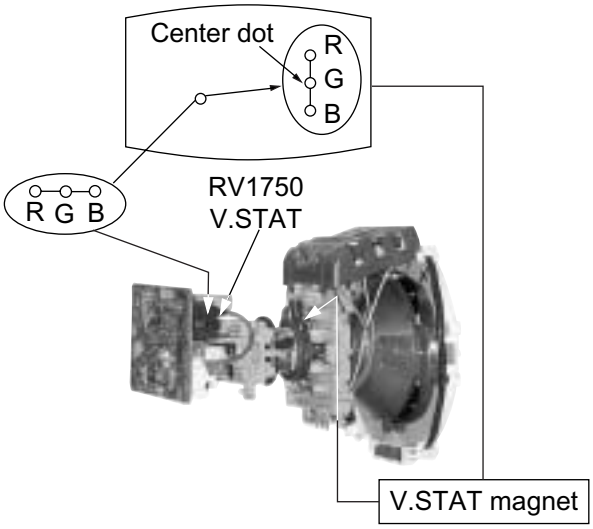
2-2. CONVERGENGE

Before starting convergence adjustments:

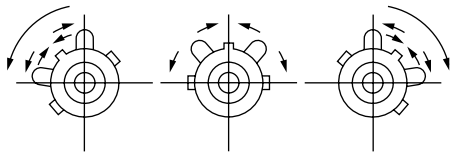
1 Perform FOCUS, VLIN and VSIZE adjustments.
2. Set BRIGHTNESS control to minimum.
3. Feed in dot pattern.

VERTICAL STATIC CONVERGENCE

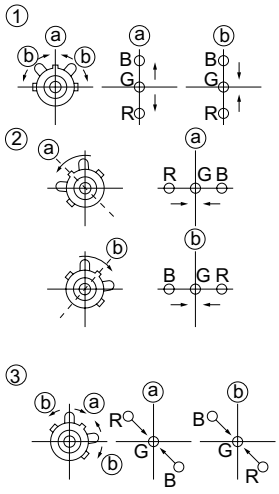
1. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen (Vertical movement adjust S V.STAT RV1750 to converge).



2. Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



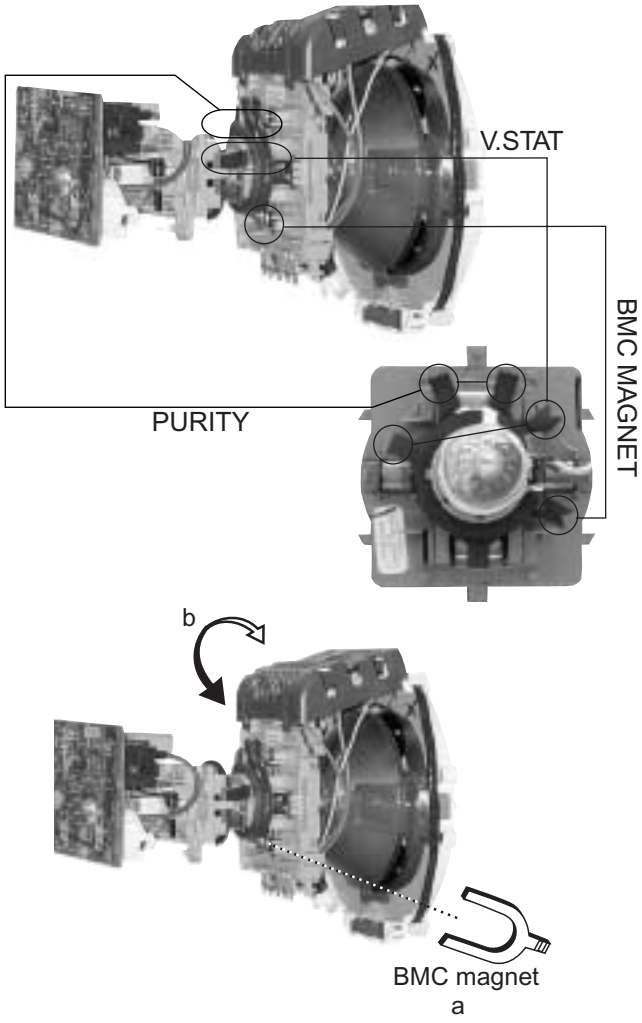
When the V. STAT magnet is moved in the direction of arrow a and b, red, green, and blue dots move as shown below:



HORIZONTAL STATIC CONVERGENCE

If the blue dot does not converge with the red and green dots, peform the following:

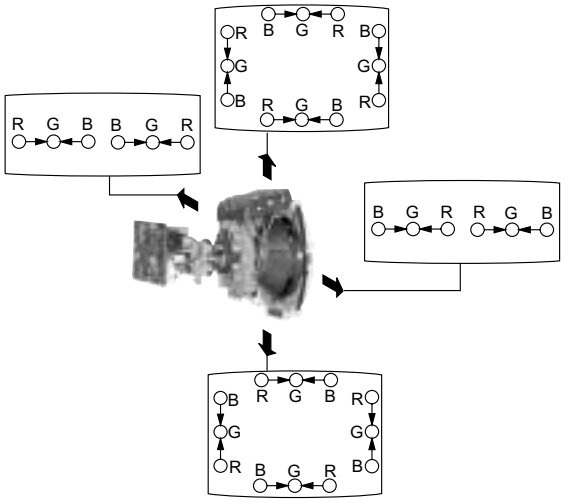
1. Move BMC magnet (a) to correct insufficient H.Static convergence.
2. Rotate BMC magnet (b) to correct insufficient V.Static convergence.
3. After adjusting the BMC magnet, repeat Beam Landing Adjustment.



DYNAMIC CONVERGENCE ADJUSTMENT

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

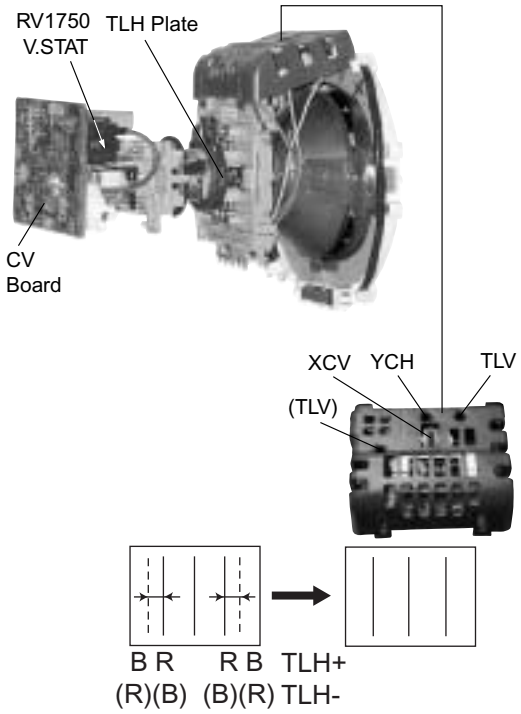
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below:



4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

TLH PLATE ADJUSTMENT

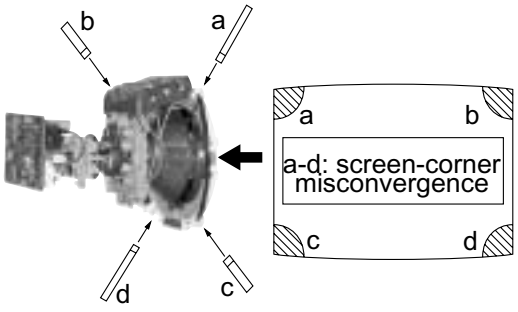
1. Input crosshatch pattern.
2. Adjust PICTURE QUALITY to standard, PICTURE and BRIGHTNESS to 50%, and OTHER to standard.
3 Adjust the Horizontal Convergence of red and blue dots by tilting the TLH plate on the deflection yoke.



4. Adjust XCV core to balance X axis.
5. Adjust YCH VR to balance Y axis.
6. Adjust vertical red and blue convergence with V.TILT (TLV VR.)
   Note: Perform adjustment 3-6 while tracking items 1 and 2.

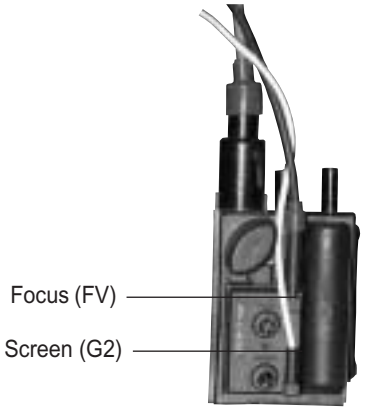
SCREEN-CORNER CONVERGENCE

1. Affix a permalloy assembly corresponding to the misconverged areas:



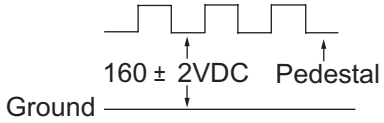
2-3. FOCUS

1. Adjust FOCUS control for best pictures.



2-4. SCREEN (G2)

1. Input a dot pattern.
2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 160 ± 2VDC.



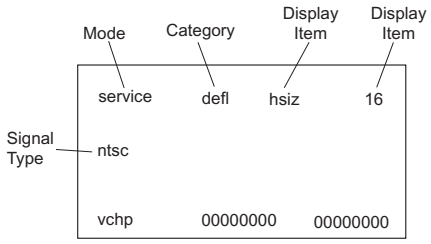
2-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

1. Standby mode (power off).
2. Press [Display] ➡ Channel [5] ➡ Sound Volume [+] ➡ Power on the Remote Commander (press each button within a second).

SERVICE ADJUSTMENT MODE ON

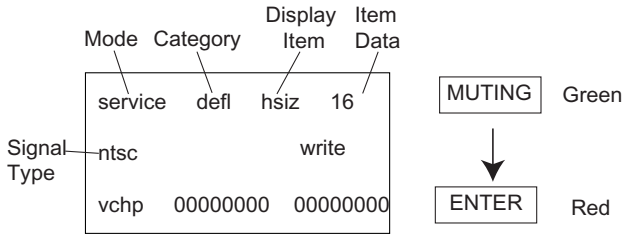
1. The CRT displays the time being adjusted.



2. Press [1] or [4] on the Remote Commander to select the time.
3. Press [3] or [6] on the Remote Commander to change the data.
4. Press [MUTING] then [ENTER] to save into the memory.

SERVICE ADJUSTMENT MODE MEMORY

Turn the set off then on to exit Service Adjustment Mode.



2-6. WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal with burst.
2. Set to Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Adjust with SBRT if necessary.
5. Select GCUT and BCUT with [1] and [4] .
6. Adjust with [3] and [6] for the best white balance.
7. Set the PICTURE and BRIGHTNESS to maximum.
8. Select GDRV and BDRV with [1] and [4].
9. Adjust with [3] and [6] for the best white balance.
10. To write into memory, press [MUTING] then [ENTER].

SECTION 3: SAFETY RELATED ADJUSTMENTS

3-1. ⋈ R565 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with ◪ on the schematic diagram:

Part Replaced (◪)	Adjustment (⋈)
DY, T585, CRT, IC001, IC561, C507, C508, C506, T511, L510, C588, L588, C566, C561, C563, D567, D568, D566, R567, R568, R565, R566, R562, R563, R561, R528.....A Board	HV HOLD-DOWN R565

PREPARATION BEFORE CONFIRMATION

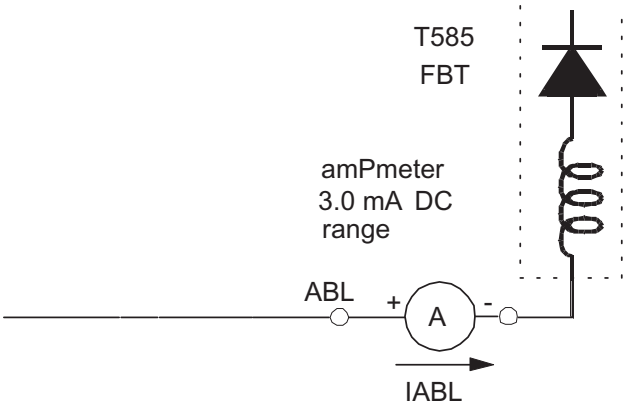
1. Using a Variac, apply AC input voltage: 120 ±2 VAC.
2. Turn the POWER switch ON.
3. Input a white signal and set the PICTURE and BRIGHTNESS controls to maximum.
4. Confirm that the voltage between C566 (+) or TP30 and ground is more than 105 VDC.

HOLD-DOWN OPERATION CONFIRMATION

1. Connect the current meter between Pin 11 of the FBT (T585) and the PWB land where Pin 11 would normally attach (See Figure 1 on the next page).
2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL = 100 ± 100µA.
3. Confirm the voltage of A Board TP-23 is 138.0 ± 0.3VDC.
4. Connect the digital voltmeter and the DC power supply via Diode 1SS119 to C566 (+) and ground (See Figure 1 on next page).
5. Increase the DC power voltage gradually until the picture blanks out.
6. Turn DC power source off immediately.
7. Read the digital voltmeter indication (standard < 117VDC).
8. Input a white signal and set PICTURE and BRIGHTNESS to maximum: IABL = 1650 ± 100µA.
9. Repeat steps 4 to 7.

HOLD-DOWN READJUSTMENT

If the setting indicated in Step 2 of Hold-Down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R565 component marked with ⋈.



3-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with ◪ on the schematic diagram on the A Board:

A BOARD:	IC604, PH602

1. Using a Variac, apply AC input voltage: 130 + 2.0 / - 0.0 VAC.
2. Input a DOT pattern at Q.C.
3. Set the PICTURE and the BRIGHTNESS controls to minimum.
4. Confirm the voltage of A Board between TP-23 & Ground is <136.6 VDC.
5. If step 4 is not satisfied, replace the components listed above, then repeat Steps 1 – 3.

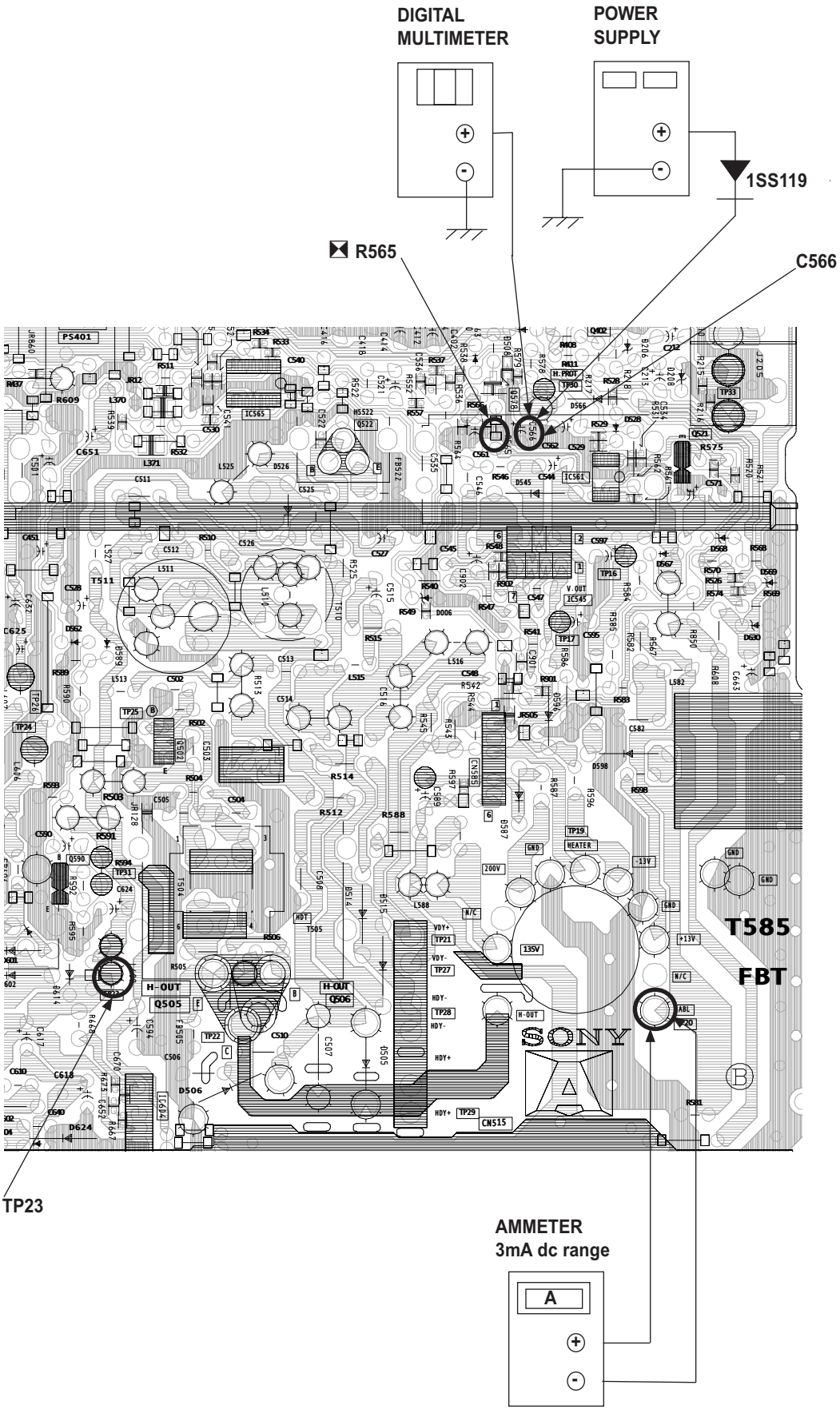

DIGITAL
MULTIMETER
POWER
SUPPLY
1SS119
R565
C566
TP23
AMMETER
3mA dc range
A
T585
FBT
SONY
H-OUT
Q505
H-OUT
Q506
PS401
IC565
IC561
IC545
T511
CN515
TP19
HEATER
200V
135V
+13V
-13V
GND
W/C
ABL
TP20
TP21
TP27
TP28
TP29
TP22
TP23
TP24
TP25
TP26
TP31
TP33
R565
C566

Figure 1

SECTION 4: CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

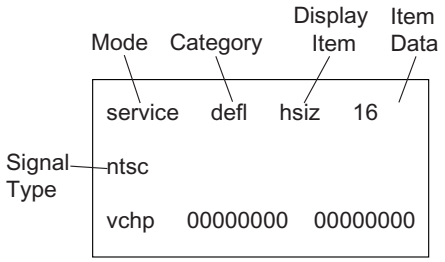
Use the Remote Commander (RM-Y173) to perform the circuit adjustments in this section.
Test Equipment Required: 1. Pattern generator 2. Frequency counter 3. Digital multimeter 4. Audio oscillator

4-1. SETTING THE SERVICE ADJUSTMENT MODE

1. Standby mode (Power off).
2. Press the following buttons on the remote commander within a second of each other:
   Display ➡ Channel 5 ➡ Sound Volumne + ➡ Power

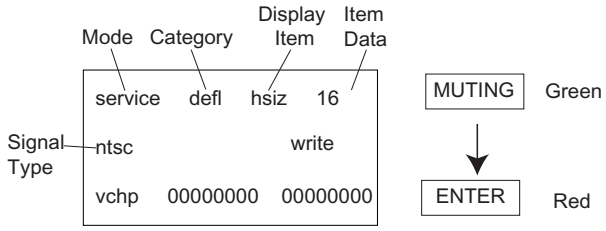
SERVICE ADJUSTMENT MODE ON

1. The CRT displays the item being adjusted.

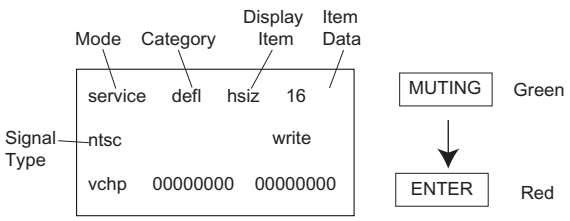


2. Press 1 or 4 on the Remote Commander to select the item.
3. Press 3 or 6 on the Remote Commander to change the data.
4. Press MUTING then ENTER to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



1. Press 8 then ENTER on the Remote Commander to initialize.



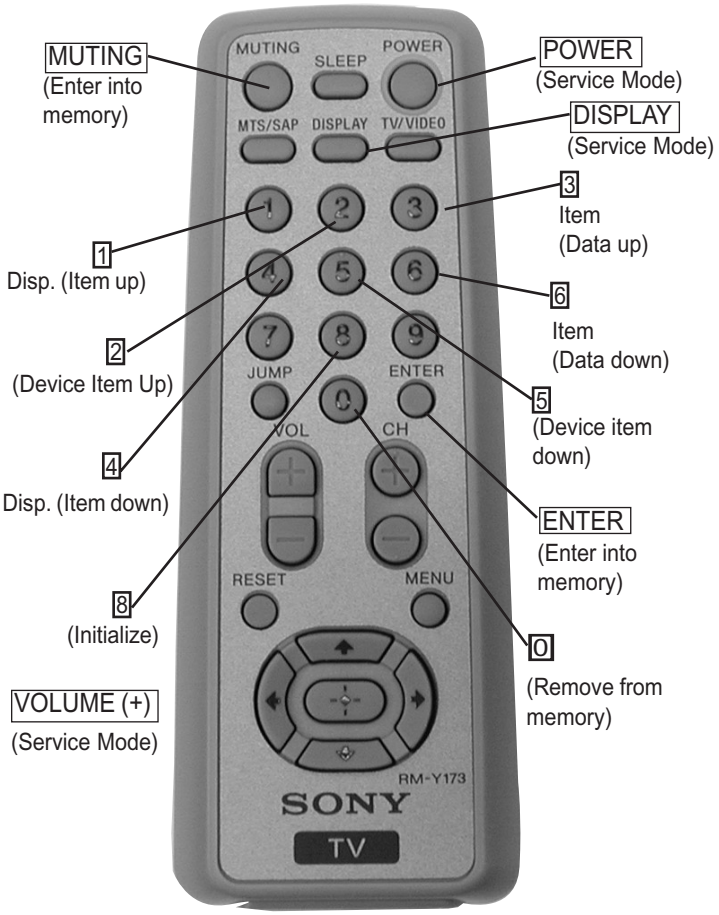
Carry out Step 1 when adjusting IDs 0-7 and when replacing and adjusting IC002

2. Turn set off then on to exit Service Adjustment Mode.

4-2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again to confirm they were adjusted.

4-3. REMOTE ADJUSTMENT BUTTONS AND INDICATORS



RM-Y173

ADJUSTMENT ITEMS (1 OF 8)

DEVICE "DEF"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	HSIZ	H SIZE(EW DC)	00-63	25
2	HPOS	H POSITION	00-63	41
3	VSIZ	V RAMP SIZE	00-63	25
4	VPOS	V POSITION(RAMP DC)not useful	00-63	34
5	VLIN	V LINEARITY	00-63	36
6	SCOR	S CORRECTION	00-63	39
7	VBOW	BOW	00-63	36
8	VANG	ANGLE	00-63	35
9	TRAP	EW TRAPESIUM	00-63	29
10	PAMP	EW PIN	00-63	39
11	UPIN	UPPER PIN	00-63	28
12	LPIN	LOWER PIN	00-63	29
13	TROT	TROT	00-255	128
14	HBLK	H BLK mode select	00-01	0
15	LBLK	HBLK front timing	00-63	5
16	RBLK	HBLK rear timing	00-15	31
17	VBLK	V BLK width	00-03	0
18	HMSK	TOP VEND(when MACROVISION)prevent OFF	00-01	0
19	HDW	H PULSE WIDTH(25u/19u)	00-01	1
20	AFC	AFC GAIN	00-01	0
21	AFC1	AFC1 TIME CONSTANT	00-07	3
22	AFCW	AFC1 PULL IN WIDE	00-01	1
23	CDMD	V DET WINDOW SW TIMING	00-03	1
24	HSS	SYNC SLICE LEVEL(H sepa)	00-03	0
25	VSS	SYNC SLICE LEVEL(V sepa)	00-03	3
26	SLDN	Auto Slice level DOWN	00-03	0
27	SLUP	Auto Slicelevel UP	00-01	0
28	JPSW	Jump SW	00-01	0
29	HOSC	H VCO fo ADJUST	00-255	5
30	EHT	EHT	00-15	6
31	EHTG	EHT MODE	00-01	0

DEVICE "16:9"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	PAMP	EW PIN	00-63	59
2	UPIN	UPPER PIN	00-63	15
3	LPIN	LOWER PIN	00-63	21
4	ACLV	ACL VTH	00-03	0
5	ABLV	ABL VTH	63-00	58

DEVICE "VP1"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	RDRV	R DRIVE	00-127	55
2	GDRV	G DRIVE when Color Temp. is "Cool" and "Neutral"	00-127	38
3	BDRV	B DRIVE when Color Temp. is "Cool" and "Neutral"	00-127	47
4	RCUT		00-1023	130
5	GCUT		00-1023	90
6	BCUT		00-1023	72
7	SCON	CONTRAST LEVEL	00-127	20
8	SHUE	TINT	00-127	8
9	SCOL	COLOR LEVEL	00-127	17
10	SBRT	BRIGHT	00-255	35
11	RON	R OUTPUT MUTE	00-01	1
12	GON	G OUTPUT MUTE	00-01	1
13	BON	B OUTPUT MUTE	00-01	1
14	BLLV	BLUE STRETCH(00:no <-> 11:deep)	00-03	1
15	MTRX	MATRIX RATIO SELECT	00-03	2
16	AXIS	R-Y PHASE OFFSET	00-63	48
17	SSHO	SHARPNESS GAIN(OVER)	00-63	17
18	SSHP	SHARPNESS GAIN(PRE)	00-63	26
19	SHPF	SHRPNESS fo(00:2 CLK <-> 11:5 CLK)	00-03	1

ADJUSTMENT ITEMS (2 OF 8)

DEVICE "VP1"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
20	SHCL	SHARPNESS CPRING LEVEL	00-15	0
21	SHMX	SHARPNESS LIMITTER LEVEL	00-15	15
22	ACLV	ACL VTH	00-03	0
23	ABLV	ABL VTH	00-63	0
24	AKBD	AKB Self Diagnostic Counter(@1sec)	00-07	7
25	AKBS	AKB H/W S/W Switch	00-02	1
26	REFP	AKB REFPLS timing	00-01	1
27	YNRC	YNR LIMITER LEVEL	00-15	15
28	BKON	BLACK STRETCH ON	00-01	1
29	BKTH	BLACK STRETCH DETECTOR TRESH LEVEL	00-255	22
30	BKAR	BLACK STRETCH DETECTOR TRESH AREA	00-03	1
31	BKSP	BLACK STRETCH START POINT	00-03	1

DEVICE "VP2"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VMLO	VM LEVEL at "Low" Setting	00-15	10
2	VMHI	VM LEVEL at "High" Setting	00-15	15
3	VMDL	VM DELAY	00-15	6
4	VMPL	VM PORALITY	00-01	0
5	VMWD	VM WIDTH	00-03	0
6	VMCL	VM CORING LEVEL	00-15	0
7	VMMX	VM LIMITER LEVEL	00-15	15
8	CKLV	COLOR KILLER VTH	00-127	1/YUV:0
9	CKON	FORCE KILLER	00-01	0
10	ALFA	ADAPTIVE DET SENSITIVITY	00-03	2
11	YCMD	YC SEPA FORCE SELECT(00:ADAPTIVE 01:H 10:V 11:HV)	00-03	0
12	VACL	V APERTURE CORING LEVEL	00-15	0
13	VAGA	V APERTURE GAIN LEVEL	00-15	Soft Cont'l
14	VAMX	V APERTURE LIMITER LEVEL	00-15	3
15	GAMM	GANMA(00:no <-->11:deep)	00-03	Soft Cont'l
16	YDLY	Y DELAY TIME	00-03	3/YUV:3
17	CDLY	C DELAY	00-03	2/YUV:2
18	YOFF	Y OUTPUT MUTE	00-01	0
19	CBPF	C BPF fo HI	00-01	0/YUV:0
20	CLIM	C OUTPUT LIMITTER	00-15	15
21	YFSL	Y BAND WIDTH	00-03	0
22	CFSL	C BAND WIDTH	00-03	0
23	BGPP	BGP(for C DECODER)TIMING	00-31	8
24	NRCH	NOISE DET TIME CONSTANT	00-03	0
25	NRCL	NOISE DET TIME CONSTANT	00-255	8
26	NRVL	NOISE DET VTH	00-255	16
27	NRVH	NOISE DET VTH	00-255	0
28	GDOF	G DRIVE	00-31	18
29	BDOF	B DRIVE	00-31	31
30	GCOF	G CUTOFF	00-31	02
31	BCOF	B CUTOFF	00-31	00
32	DCTV	DCTRANSFER VTH	00-127	5
33	DCTG	DCTRANSFER GAIN	00-31	Soft Cont'l

ADJUSTMENT ITEMS (3 OF 8)

DEVICE "VIVID"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VPIC	Picture(VIVID)	00-63	63
2	VBRI	Brightness(VIVID)	00-63	31
3	VCOL	Color(VIVID)	00-63	37
4	VHUE	Hue(VIVID)	00-63	31
5	VSHA	Sharpness(VIVID)	00-63	31
6	VVM	VM(VIVID)	00-02	2
7	VTRI	Color Temp(VIVID)	00-02	0
8	VAPA	Aperture G(VIVID)	00-15	7
9	VGMA	Gamma(VIVID)	00-03	3
10	DCTG	DCT LV(VIVID)	00-03	16

DEVICE "STD"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VPIC	Picture(STANDARD)	00-63	50/FEFS:63
2	VBRI	Brightness(STANDARD)	00-63	37/FEFS:31
3	VCOL	Color(STANDARD)	00-63	31/FEFS:37
4	VHUE	Hue(STANDARD)	00-63	31/FEFS:31
5	VSHA	Sharpness(STANDARD)	00-63	31/FEFS:31
6	VVM	VM(STANDARD)	00-02	1/FEFS:2
7	VTRI	Color Temp(STANDARD)	00-02	1/FEFS:0
8	VAPA	Aperture G(STANDARD)	00-15	7/FEFS:7
9	VGMA	Gamma(STANDARD)	00-03	3/FEFS:3
10	DCTG	DCT LV(STANDARD)	00-03	16/FEFS:16

DEVICE "MOVIE"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VPIC	Picture(MOVIE)	00-63	31
2	VBRI	Brightness(MOVIE)	00-63	51
3	VCOL	Color(MOVIE)	00-63	25
4	VHUE	Hue(MOVIE)	00-63	31
5	VSHA	Sharpness(MOVIE)	00-63	31
6	VVM	VM(MOVIE)	00-02	0
7	VTRI	Color Temp(MOVIE)	00-02	2
8	VAPA	Aperture G(MOVIE)	00-15	7
9	VGMA	Gamma(MOVIE)	00-03	3
10	DCTG	DCT LV(MOVIE)	00-03	16

DEVICE "SPORTS"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VPIC	Picture(SPORTS)	00-63	63
2	VBRI	Brightness(SPORTS)	00-63	31
3	VCOL	Color(SPORTS)	00-63	40
4	VHUE	Hue(SPORTS)	00-63	31
5	VSHA	Sharpness(SPORTS)	00-63	31
6	VVM	VM(SPORTS)	00-02	2
7	VTRI	Color Temp(SPORTS)	00-02	0
8	VAPA	Aperture G(SPORTS)	00-15	7
9	VGMA	Gamma(SPORTS)	00-03	3
10	DCTG	DCT LV(SPORTS)	00-03	16

ADJUSTMENT ITEMS (4 OF 8)

DEVICE "Y"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	COFI	0:4 Linedelaies 1:2 Linedelaies	00-01	0
2	YNRS	YNR ON	00-01	0
3	YTHR	Y SIGNAL GENERATE from 2DYCS	00-01	0
4	Y2D	Y SIGNAL GENERATE from 2DYCS	00-01	0
5	2DFX	C SIGNAL GENELATE from H/V BPF only	00-01	1
6	CLPS	Y CLAMP TIME CONSTANT	00-01	1
7	VLPF	Y_LPF(ANALOG) fo Ajust	00-03	3
8	CLPF	C_LPF(ANALOG) fo Ajust	00-03	3
9	BKHS	BLACK STRETCH HYSTERISYS	00-31	1
10	BPFB	YCS HBPF SELECT(BACK)	00-03	1
11	BPFF	YCS HBPF SELECT(FRONT)	00-01	1

DEVICE "C"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	FORG	CHROMA DECODER PHASE SELECT	00-03	0
2	FSEL	CHROMA DECODER CLK SELECT	00-01	0/YUV:0
3	ACTL	ANALOG ACC AMP MAX GAIN	00-03	3
4	A1FL	ANALOG ACC hysteresis	00-255	34
5	A1FH		00-01	0
6	A1ON	ANALOG ACC AMP ON LEVEL	00-127	12
7	MV	MACROVISION(BURST) DET TRESH	00-15	0
8	MV1S	MACROVISION(BURST) DET ON	00-01	1
9	MV2S	MACROVISION(BURST) DET POSITION	00-01	1
10	ACCS	ACC ON/OFF	00-01	0/YUV:1
11	KILS	KILLER DET SELECT	00-01	0/YUV:1
12	AASL	C DECODER TIME CONSTANT(32,16,8,1H)	00-03	3
13	BASL	ACC TIME CONSTANT	00-03	0
14	ATIM	ANALOG ACC HISTERISYS SELECT	00-03	0
15	VMSK	ACC V BLK OFF WIDTH	00-07	0
16	A3ON	ACC MAX GAIN	00-01	0
17	INTE	C DECODER INTRGRATOR ENABLE	00-01	0
18	SIN	C DECODER PHASE V ENABLE	00-01	0
19	CKVT	PLL STOP BURST LEVEL	00-03	1
20	XFFR	VCXO FORCE FREERUN	00-01	0/YUV:1
21	ACCV	C DECODER PHASE V ENABLE	00-01	1
22	BWSL	KILLER DET SELECT	00-01	1/YUV:1
23	BWDT	PLL KILLER VTH	00-03	0/YUV:3
24	A23E	AMP2,3 ON/OFF ENABLE(0 FIX)	00-01	1
25	A2ON	ABL VTH	00-127	12
26	A3ON	ACL VTH	00-127	12
27	A2FL	AMP2 OFF LEVEL lower	00-255	34
28	A2FH	AMP2 OFF LEVEL upper	00-01	0
29	A3FL	AMP3 OFF LEVEL lower	00-255	34
30	A3FH	AMP3 OFF LEVEL upper	00-01	0
31	AXTH	AXS HYS	00-63	30
32	ACTH	ROM HYS	00-63	10
33	AVAV	AVE SEL AV	00-03	3
34	B2TH	B2COMP	00-127	0

ADJUSTMENT ITEMS (5 OF 8)

DEVICE "RGB"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	AMUT	RGB POWER ON MUTE	00-01	0
2	PMUT	RGB MUTE(EXCEPT OSD)	00-01	1
3	VBLK		00-01	0
4	CORL	R CUTOFF lower	00-255	100
5	CORH	R CUTOFF upper	00-01	1
6	COGL	G CUTOFF lower when Color Temp. is "Cool" and "Neutral"	00-255	125
7	COGH	G CUTOFF upper when Color Temp. is "Cool" and "Neutral"	00-01	1
8	COBL	B CUTOFF lower when Color Temp. is "Cool" and "Neutral"	00-255	125
9	COBH	B CUTOFF upper when Color Temp. is "Cool" and "Neutral"	00-01	1
10	ABLS	ABL SELECT (ON:00, OFF:01)	00-01	0
11	ACLS	ACL ON (ON:00, OFF:01)	00-01	1
12	ALSP	ACL SPEED	00-03	1
13	ALRS	ACL RECOVER SPEED	00-15	2
14	ALAS	ACL ATACK SPEED	00-15	9
15	ABLG	ABL GAIN	00-15	15
16	ALS2	ACL ATACK SPEED(2)	00-03	2
17	AKBS	AKB MODE	00-01	1
18	AKBP	AKB PULSE HEIGHT	00-63	40
19	OSDL	OSD LIMMIT SELECT	00-01	0
20	MPXS	UV MULTIPLEX ON	00-01	0/YUV:0
21	CXUV	YC/YUV SELECT	00-01	0/YUV:1
22	UVIN	U/V INVERT	00-01	0/YUV:0
23	UVOS	UV OFFSET CANCELER ON	00-01	0/YUV:0
24	ACL	SOFT ACL CONTROLE	00-63	63
25	HBLS	H BLK OFF	00-01	0
26	VENS	V-latch OFF	00-01	0
27	UOFS	U IN OFFSET	00-15	4
28	VOFS	V IN OFFSET	00-15	9
29	AABL	ANALOG ABL THRESHOLD LEVEL CONTROL	00-15	0
30	AABG	ANALOG ABL GAIN CONTROL	00-01	0
31	AALG	ANALOG ACL GAIN CONTROL	00-01	0
32	AABS	ANALOG ABL ON/OFF CONTROL (ON:01, OFF:00)	00-01	0
33	AALS	ANALOG ACL ON/OFF CONTROL (ON:01, OFF:00)	00-01	1

ADJUSTMENT ITEMS (6 OF 8)

DEVICE "DEFD"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	VSTP	V OUTPUT STOP	00-01	0
2	HFFR	AFC1 FORCE FREERUN	00-01	0
3	HFUP	H FREERUN FREQUENCY UP(700Hz)	00-01	0
4	VPHA	V PHASE(V POSITION ADJUST)	00-15	0
5	JSWW	Jump Pulse Width	00-01	0
6	EWG	EWV AD OUTPUT LEVEL(6db)	00-01	0
7	EWCL	EW/VRAMP DA CLOCK SELECT	00-03	2/YUV:2
8	EWDI	EW/VRAMP DA DITHER	00-01	0
9	XF0A	VCXO FREERUN ADJUST	00-15	0
10	BGST	BGP(for PLL) TIMING	00-63	17
11	SKWI	Skew correcter refernce phase	00-01	0/YUV:0
12	XPHA	VCXO PHASE ADJUST	00-15	10
13	SKEW	Skew correcterphase controle	00-07	0/YUV:3
14	HRMP	AFC2 TIME CONSTANT	00-03	0
15	RPLU	REF PLL TIME CONSTANT	00-07	3
16	RPLB	REF PLL TIME CONSTANT	00-01	1
17	XF0B	VCXO Fo ADJUST	00-03	0
18	RPLS	REF VCO FB LOOP SELECT	00-01	0
19	SSM	SyncSepaMasking CONTROL	00-01	0
20	VSAG	V-SAG prevent ON	00-01	0
21	AFC2	AFC2 GAIN CONTROL	00-03	0
22	VRFL	V RAMP FILTER SWITCHING OFF	00-01	0
23	SSLP	LPF pre SYNC SEPA ON/OFF	00-01	0
24	IMTS	I.M. TEST	00-01	0
25	XPLU	ACP TIME CONSTANT	00-01	0
26	8FSC	8fscCLK Skew OFF	00-01	1/YUV:1
27	4FS2	4fscCLK Skew OFF	00-01	1/YUV:1
28	EWVR	DSDAC V RESET Enable	00-01	0
29	VLOF	IIC V Latch OFF(for TEST)	00-01	0
30	1WIN	FORCE 1Window	00-01	1
31	BGPC	ANGLE Return current up	00-01	0
32	MHDL	ANGLE Return current up timing	00-01	1
33	BFRE	force V FREERUN	00-01	0
34	ANGG	ANGLE Retun current up	00-01	1
35	ANGT	ANGLE Retun current up timing	00-01	0
36	DOSD	Digital OSD ON	00-01	0
37	ANGS	AFC2 ANGLE/BOW INHIBIT	00-01	0
38	HRPP	FRAMP RRAMP H OUT CONTROL RANGE	00-15	8
39	VF50	FORCE V FREERUN 50Hz	00-01	0
40	CLKS	TBC clock system select	00-03	0
41	VBHK	V BLK HALF KILL	00-01	0
42	DSYC	CVBS INPUT CONTROL	00-01	0
43	VPW	V Pulse Wide	00-01	1
44	QSW	MODULATOR FEEDBACK GAIN CONTROL	00-01	0
45	ADTY	CLOCK DUTY CONTROL at IIC QSWITCH=ON	00-01	0
46	DTH	DITHER THRESHOLD LEVEL CONTROL at IIC AUTOD=ON	00-03	1
47	HBSW	HBLK REFERENCE AFC1/AFC2	00-01	0
48	DSCS	•DAC CLOCK ON/OFF CONTROL	00-01	0

ADJUSTMENT ITEMS (7 OF 8)

DEVICE "OTHER"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	PCLP	SYNC TIP/PEDESTAL CLAMP SELECT	00-01	0
2	VRT	ADC REFERENCE (00:1.15Vpp 01:1.25Vpp 10:1.35Vpp 11:1.45Vpp)	00-03	1/YUV:1
3	AM	INTERIGENT MONITOR OUTPUT SELECT(analog)	00-15	0
4	DME	INTERIGENT MONITOR OUTPUT SELECT(degital)	00-01	0
5	DM	INTERIGENT MONITOR OUTPUT SELECT(degital)	00-31	0
6	14HI	4fsc(Skew)CLK POLARITY	00-01	0
7	14HD	4fscCLK(Skew)CLK DELAY ADJUST	00-03	1
8	28I	8fscCLK POLARITY	00-01	1
9	28D	8fscCLK DELAY ADJUST	00-03	1
10	ADCD	ADC CLK DELAY ADJUST	00-03	1/YUV:0
11	CLKS	AD/LOGIC CLK SWAP	00-01	0/YUV:0
12	HDSL	HD OUT(for MCU)SELECT	00-01	1
13	CPSL	PLL CP LATCH ON	00-01	0
14	CPCL	PLL CP LATCH CLOCK	00-01	0
15	CPCP	PLL CP LATCH POLARTY	00-01	0
16	DUMY	DUMMY	00-0F	1

DEVICE "OSD"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	HT	HALF TONE LEVEL	00-03	0
2	OSLR	R OSD LEVEL	00-63	27
3	OSLG	G OSD LEVEL	00-63	27
4	OSDC		00-03	0
5	OSDB	B OSD LEVEL	00-63	27

DEVICE "S/W ADKB"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	SRIL	S/W AKB RED OUTPUT Lower	00-255	Soft Cont'l
2	SRIH	S/W AKB RED OUTPUT Upper	00-01	Soft Cont'l
3	SGIL	S/W AKB GREEN OUTPUT Lower	00-255	Soft Cont'l
4	SGIH	S/W AKB GREEN OUTPUT Upper	00-01	Soft Cont'l
5	SBIL	S/W AKB BLUE OUTPUT Lower	00-255	Soft Cont'l
6	SBIH	S/W AKB BLUE OUTPUT Upper	00-01	Soft Cont'l
7	SLM1	S/W AKB LIMIT DATA 1	00-255	4
8	SLM2	S/W AKB LIMIT DATA 2	00-255	29
9	SLM3	S/W AKB LIMIT DATA 3	00-255	130
10	SAD1	S/W AKB ADD DATA 1	00-255	1
11	SAD2	S/W AKB ADD DATA 2	00-255	1
12	SBIT	S/W AKB BIT SHIFT DATA	00-05	0
13	SNOP	S/W AKB POWER ON NOP TIMER COUNTER DATA	00-FF	1
14	SERL	S/W AKB BIT ERROR JUDGE LEVEL	01-80	124
15	SPWC	S/W AKB ERROR JUDGE COUNTER DATA	01-FF	2
16	SLMC	S/W AKB LIM2/LIM3 JUDGE COUNTER DATA	01-FF	10
17	SPWL	S/W AKB POWER ON MUTE OFF JUDGE LEVEL	01-80	30
18	SPMT	S/W AKB POWER ON MUTE EXIT TIMER DATA(@100ms)	00-FF	120
19	SEEP	S/W AKB INITIAL DATA EEPROM WRITE TIMER(@1sec)	00-FF	20

ADJUSTMENT ITEMS (8 OF 8)

DEVICE "AUDIO PROCESSOR"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	SBAL	Sub Balance	00-07	4
2	SBAS	Sub Bass	00-07	0
3	STRE	Sub Treble	00-07	0
4	SRL	Surround Level	00-01	0
5	BBOL	Surround Off-BBE Low	00-15	0
6	BBOH	Surround Off-BBE High	00-15	3
7	BBSL	Simulate BBE Low	00-15	0
8	BBSH	Simulate BBE High	00-15	0
9	BBGL	WOW Game BBE Low	00-15	7
10	BBGH	WOW Game BBE High	00-15	3
11	BBTL	SRS BBE Low	00-15	0
12	BBTH	SRS BBE High	00-15	2
13	VFIX	Audio output fix data	00-255	240
14	AGCL	AGC level	00-03	2

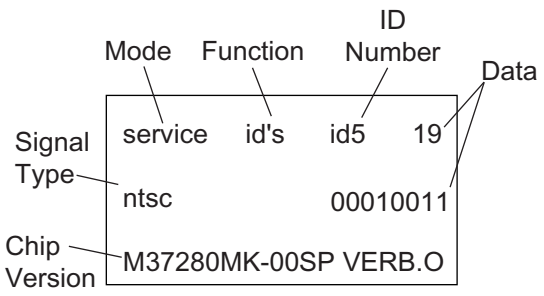
DEVICE "MICROPROCESSOR"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
1	DISP	OSD horizontal offset	00-127	78
2	CCHP	Closed Caption Horizontal Position	00-7E	80
3	HRLW	Low limit of H-pulse counting window (RF)	00-255	16
4	HRHG	High limit of H-pulse counting wondow (RF)	00-255	64
5	HSLW	Low limit of H-pulse counting window (S-Video)	00-255	16
6	HSHG	High limit of H-pulse counting wondow (S-Video)	00-255	64
7	HSDT	H-pulse Detection(S-Video)	00-255	8

DEVICE "FEATURE"

Item#	OSD	DETAIL	Range (DEC)	Initial Data
	ID0	Language related	00-255	SEE ID MAP
	ID1	Video ralated	00-255	SEE ID MAP
	ID2	Audio related	00-255	SEE ID MAP
	ID3	Miscellaneous	00-255	SEE ID MAP
	ID4	Miscellaneous	00-255	SEE ID MAP
	ID5	Miscellaneous	00-255	SEE ID MAP
	ID6	Miscellaneous	00-255	SEE ID MAP
	ID7	Miscellaneous	00-255	SEE ID MAP

Notes:
Range (DEC) shows the range of possible setting for each Adjustment Mode.
Initial Data shows the standard settings for each Adjustment Mode.



4-4. ID MAP TABLE

Model	Destination	ID-O	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
KV-24FS100	US	89	23	65	33	128	48	0	150
KV-24FS100	CND	89	23	65	49	128	48	0	150
KV-25FS100	E	81	23	81	129	160	48	0	214

4-5. A BOARD ADJUSTMENTS

H. FREQUENCY (FREE RUN) CHECK

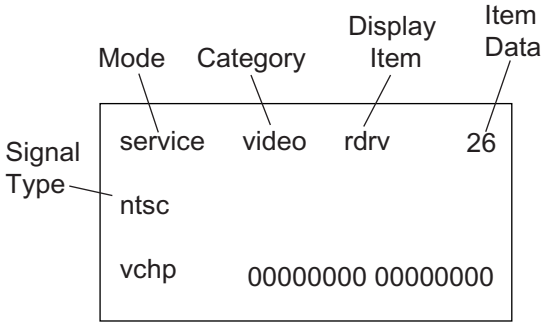
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q502 (TP-25 H. DRIVE) on the A Board.
3. Check H. Frequency for 15735 ± 200 Hz.

V. FREQUENCY (FREE RUN) CHECK

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter to TP-27 (V OUT) or CN515 pin ⑥ (V DY+) and ground on the A Board .
4. Check that V. Frequency shows 60 ± 4 Hz.

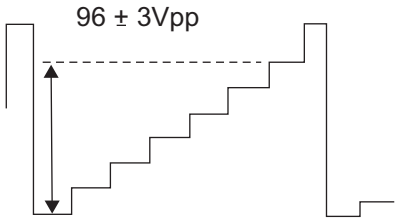
DRIVE (SCON)

1. Input a color-bar signal and set the level to 75%.
2. Set in Standard mode.
3. Activate the Service Adjustment Mode.
4. Set AALS, ABLS, GON and BON items. Using 3 and 6 set each to the following values. Leave RON set to “1”.



AALS: OFF (0)
ABLS: OFF (1)
R ON: ON (1)
G ON: OFF (0)
B ON: OFF (0)

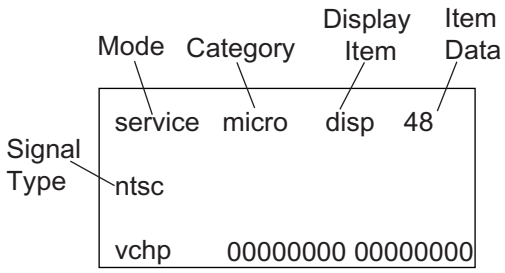
5. Connect an oscilloscope probe to CV Board, J1751Pin 12 (KR) (Red Out) .
6. Select SCON with 1 and 4 .
7. Adjust the value of SCON with 3 and 6 for 96 ± 3Vpp.



8. Reset AALS, ABLS, GON and BON values to “1”.
   AALS: ON (1)
   ABLS: ON (0)
   R ON: ON (1)
   G ON: ON (1)
   B ON: ON (1)
9. Press MUTING then ENTER to save into the memory.

DISPLAY POSITION ADJUSTMENT (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with 1 and 4 .
4. Adjust values of DISP with 3 and 6 to adjust characters to the center.
5. Write to memory by pressing MUTING then ENTER .
6. Check to see if the text is displayed on the screen.



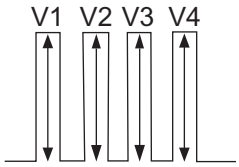
SUB BRIGHT ADJUSTMENT (SBRT)

1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with 1 and 4 .
5. Adjust the values of SBRT with 3 and 6 to obtain a faintly visible crosshatch.
6. Press MUTING then ENTER to save into the memory.

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1. Input color-bar signal at 75%.
2. Activate the Service Adjustment Mode.
3. Set (PIC) to Max and (COL) to 50%.
4. Connect an oscilloscope probe to CV Board, CN301Pin ④ Blue Out.
5. Select the SHUE and SCOL item with 1 and 4 .
6. While showing the SHUE item, adjust the waveform with 1 and 4 until the second and third bars show the same level (V2 = V3 < 0.15Vp-p). Set Sub Hue -2 Step.

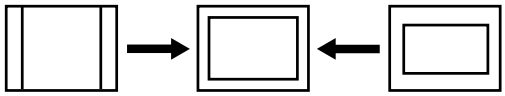
7. While showing the SCOL item, adjust the waveform with 3 and 6 until the first and fourth bars show the same level (V1 = V4 < 0.15Vp-p). Set Sub Col +3 Step.



8. Press MUTING then ENTER to save into the memory.

V. SIZE ADJUSTMENT (VSIZ)

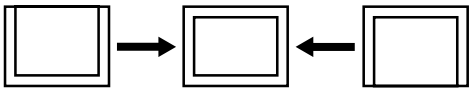
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with 1 and 4 .
4. Adjust value of VPOS with 1 and 4 for the best vertical center.
5. Press MUTING then ENTER to save into the memory.



V. CENTER ADJUSTMENT (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) Check.

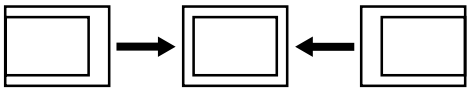
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with 1 and 4 .
4. Adjust value of VPOS with 3 and 6 for the best vertical center.
5. Press MUTING then ENTER to save into the memory.



H. CENTER ADJUSTMENT (HPOS)

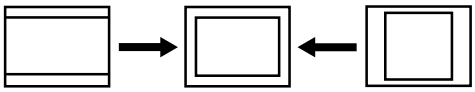
Perform this adjustment after performing H. Frequency (Free Run) Check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with 1 and 4 .
4. Adjust the value of HPOS with 3 and 6 for the best horizontal center.
5. Press MUTING then ENTER to save into the memory.



H. SIZE ADJUSTMENT (HSIZ)

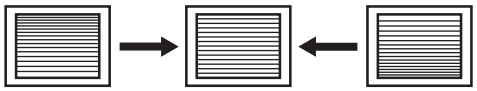
1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with 1 and 4 .
4. Adjust with 3 and 6 for the best horizontal size.
5. Press MUTING then ENTER to save into the memory.



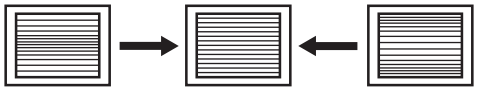
V. LINEARITY (VLIN), V. CORRECTION (SCOR), PIN AMP (PAMP), AND HORIZONTAL TRAPEZOID (HTRP) ADJUSTMENTS

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VLIN, SCOR, PAMP, and HTRP with with 1 and 4.
4. Adjust with 3 and 6 for the best horizontal size.
5. Press MUTING then ENTER to save into the memory.

V LINEARITY (VLIN)

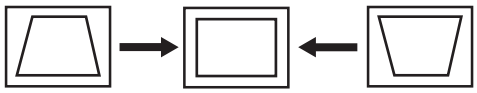


V CORRECTION (SCOR)



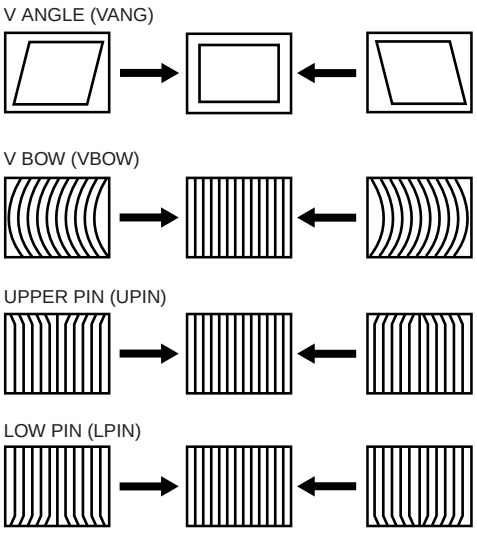
PIN AMP (PAMP)

HORIZONTAL TRAPEZOID (HTRP)



V. ANGLE (VANG), V. BOW (VBOW), UPPER PIN (UPIN) AND LOW PIN (LPIN) ADJUSTMENTS

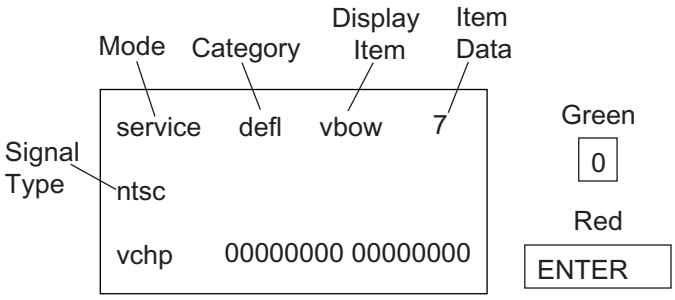
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VANG, VBOW, UPIN, and LPIN with 1 and 4.
4. Adjust with 3 and 6 for the best picture.
5. Press MUTING then ENTER to save into the memory.



SERVICE ADJUSTMENT MODE MEMORY

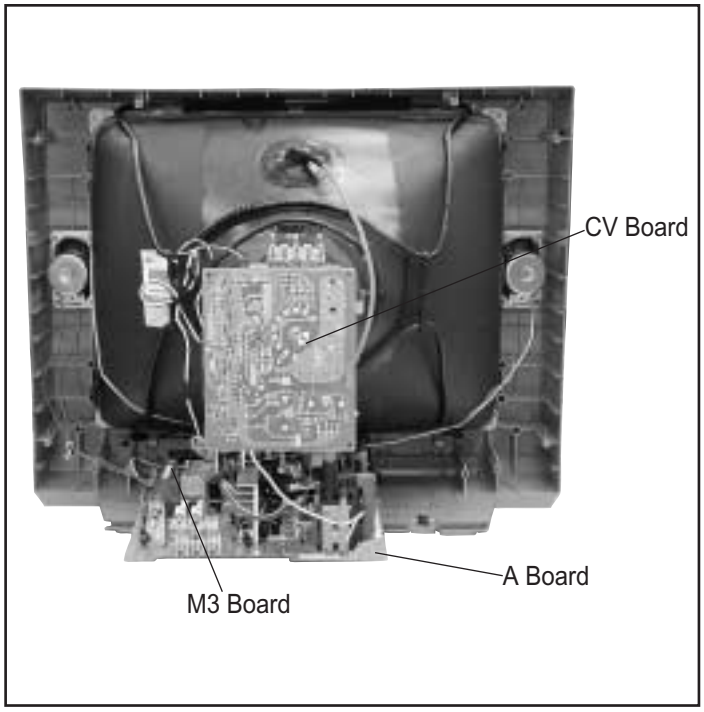
1. After completing all adjustments, press 0 then ENTER .

Read From Memory



SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. k=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm Rating electrical power :

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

△ : internal component.

: panel designation and adjustment for repair.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved. (Refer to Safety Related Adjustments on Page 15.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (◪)	Adjustment (⋈)
DY, T585, CRT, IC001, IC561, C507, C508, C506, T511, L510, C588, L588, C566, C561, C563, D567, D568, D566, R567, R568, R565, R566, R562, R563, R561, R528.....A Board	HV HOLD-DOWN R565

REFERENCE INFORMATION

RESISTOR	**: RN**	**METAL FILM**
	: RC	**SOLID**
	: FPRD	**NONFLAMMABLE CARBON**
	: FUSE	**NONFLAMMABLE FUSIBLE**
	: RW	**NONFLAMMABLE WIREWOUND**
	: RS	**NONFLAMMABLE METAL OXIDE**
	: RB	**NONFLAMMABLE CEMENT**
	: ※	**ADJUSTMENT RESISTOR**
COIL	**: LF-8L**	**MICRO INDUCTOR**
CAPACITOR	**: TA**	**TANTALUM**
	: PS	**STYROL**
	: PP	**POLYPROPYLENE**
	: PT	**MYLAR**
	: MPS	**METALIZED POLYESTER**
	: MPP	**METALIZED POLYPROPYLENE**
	: ALB	**BIPOLAR**
	: ALT	**HIGH TEMPERATURE**
	: ALR	**HIGH RIPPLE**

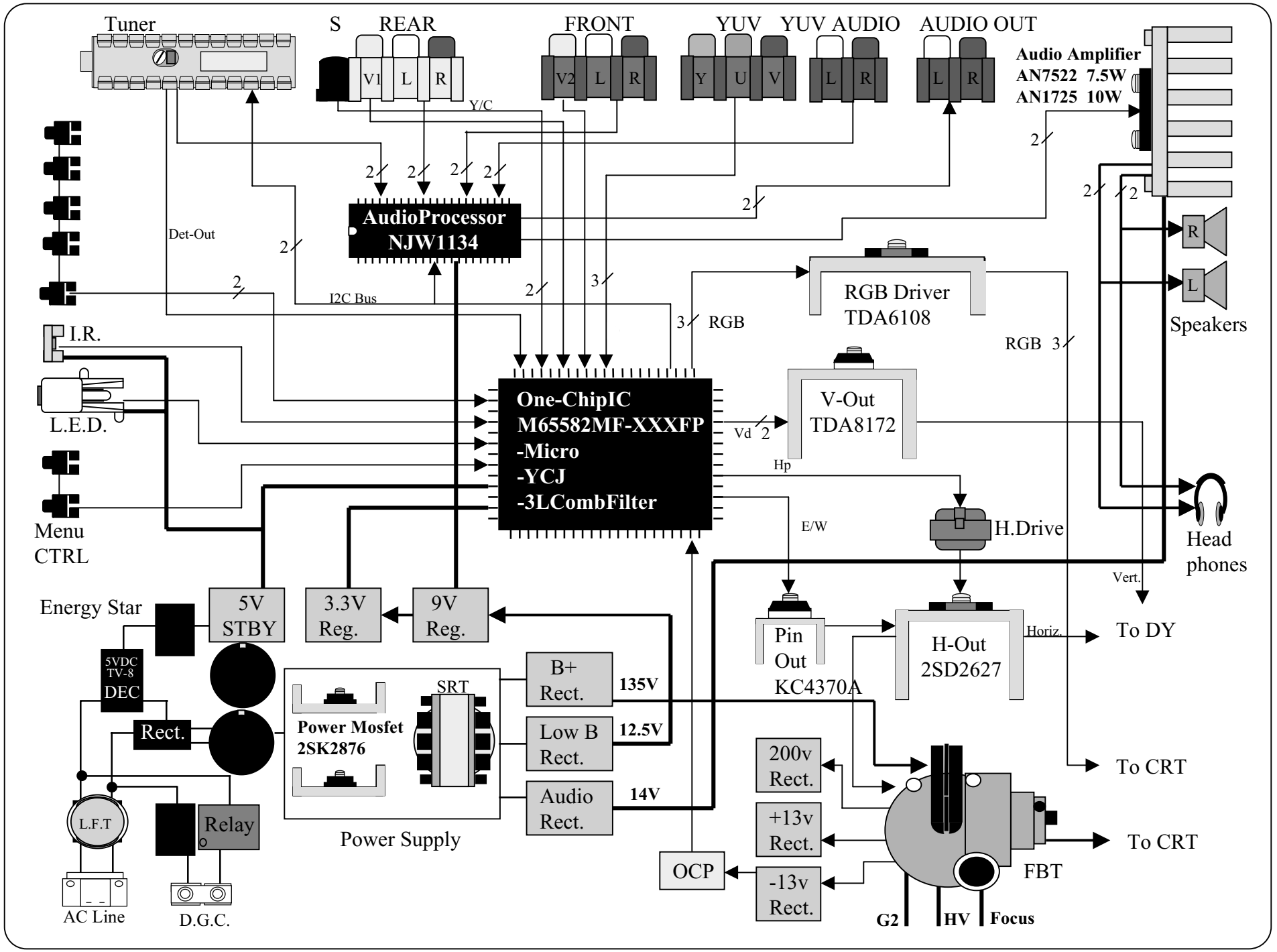
The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

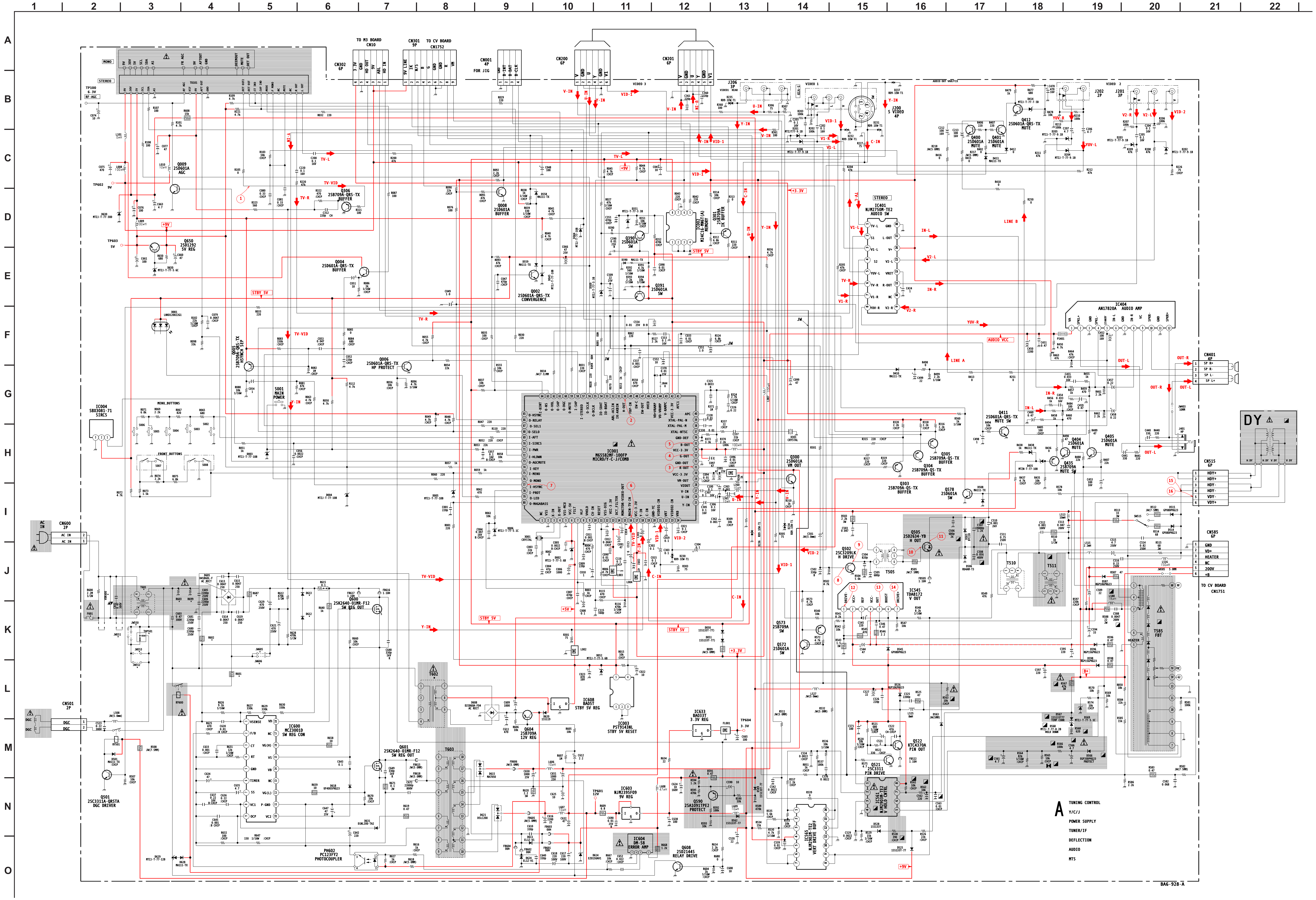
Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

BLOCK DIAGRAM

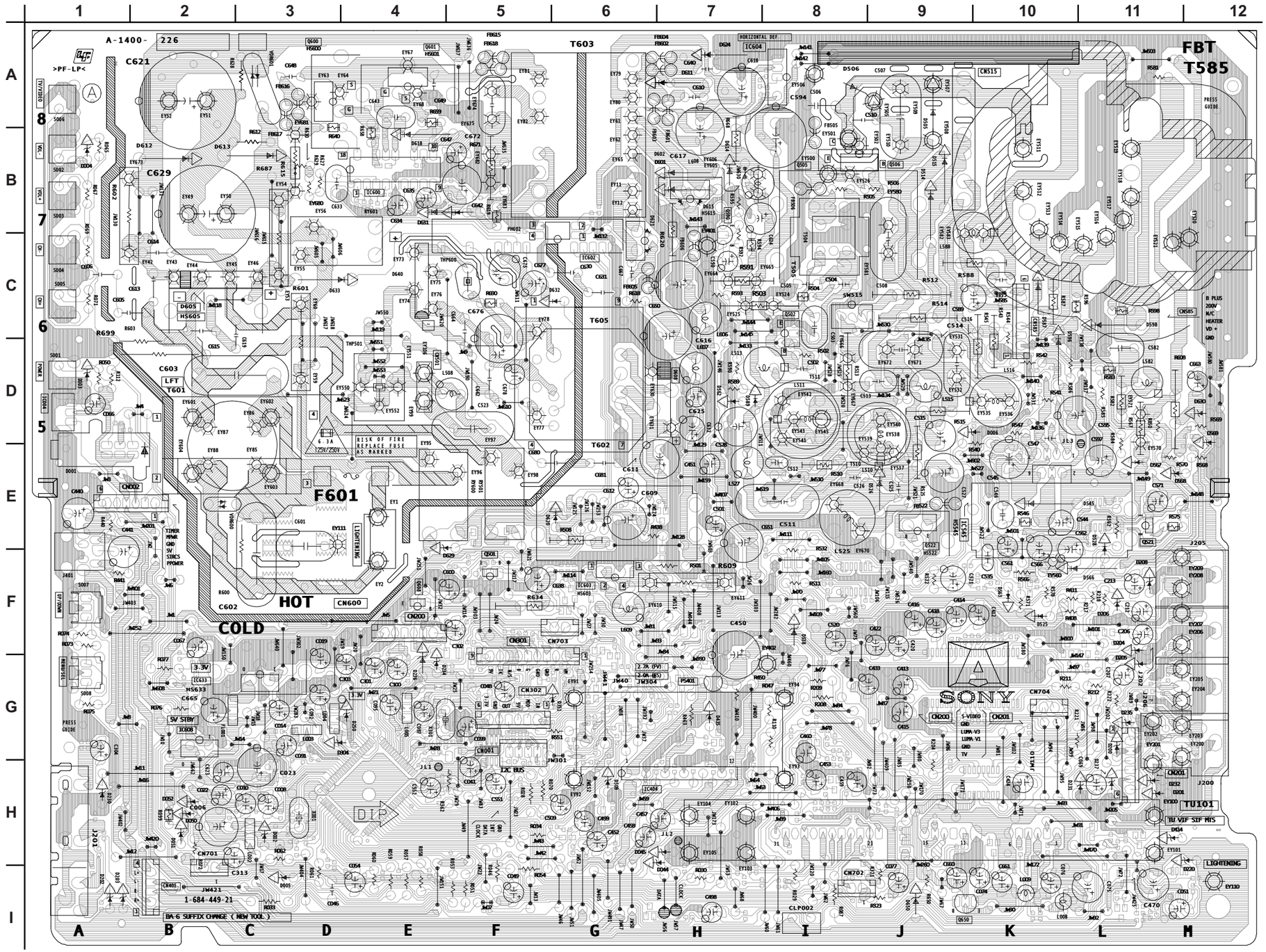


A BOARD SCHEMATIC DIAGRAM



TU101
MONO
STEREO
TO M3 BOARD CN10
CN302 6P
CN301 9P
TO CV BOARD CN1752
CN001 4P FOR JIG
CN200 6P
CN201 6P
J206 3P VIDEO1 REAR
VIDEO 1
J200 S VIDEO 4P
VIDEO 2
J202 2P
J201 3P
AUDIO OUT VAR/FIX
Q009 2SD601A AGC
Q650 2SD1292 5V REG
Q306 2SB709A-QRS-TX BUFFER
Q004 2SD601A-QRS-TX BUFFER
Q005 2SB709A-QRS-TX HSYNCH SEP
Q006 2SD601A-QRS-TX HP PROTECT
Q008 2SD601A BUFFER
Q002 2SD601A-QRS-TX CONVERGENCE
Q390 2SD601A SW
Q391 2SD601A SW
IC002 M24C16-MN6T(A) MEMORY
Q301 2SB709A IK BUFFER
IC401 NJM2750M-TE2 AUDIO SW
Q400 2SD601A MUTE
Q401 2SD601A MUTE
Q412 2SD601A-QRS-TX MUTE
IC404 AN17820A AUDIO AMP
CN401 4P
Q411 2SD601A-QRS-TX MUTE SW
Q404 2SD601A MUTE
Q405 2SD601A MUTE
Q435 2SB709A MUTE SW
DY
CN515 6P
HDY+ HDY+ HDY- HDY- VDY- VDY+
CN585 6P
GND VD+ HEATER NC 200V +B
TO CV BOARD CN1751
IC004 SBX3081-71 SIRCS
MENU_BUTTONS
FRONT_BUTTONS
S001 MAIN POWER
IC001 M65582MF-100FP MICRO/Y-C-J/COMB
Q300 2SD601A VM OUT
Q305 2SB709A-QS-TX BUFFER
Q304 2SB709A-QS-TX BUFFER
Q303 2SB709A-QS-TX BUFFER
Q578 2SD601A SW
CN600 2P AC IN
CN501 2P DGC
Q501 2SC3311A-QRSTA DGC DRIVER
T601
D605 D4SB60L-F AC RECT
Q600 2SK2640-01MR-F12 SW REG OUT
IC600 MCZ3001D SW REG CON
Q601 2SK2640-01MR-F12 SW REG OUT
PH602 PC123FY2 PHOTOCOUPLER
T602
T603
RY600
Q604 2SB709A 12V REG
IC608 BA05T STBY 5V REG
IC003 PST9143NL STBY 5V RESET
IC633 BA033T 3.3V REG
IC603 NJM2395F09 9V REG
Q590 2SA1091TPE2 PROTECT
IC604 DM-58 ERROR AMP
Q608 2SD2144S RELAY DRIVE
Q505 2SD2634-YB H OUT
Q502 2SC3209LK H DRIVE
T505
T510
T511
IC545 TDA8172 V OUT
Q573 2SB709A SW
Q572 2SD601A SW
Q522 KTC4370A PIN OUT
Q521 2SC3311 PIN DRIVE
IC561 NJM2903M-TE2 V HOLD CNTRL
IC565 NJM2902M-TE2 VERT DRIVE BUFF
T585 FBT
A
TUNING CONTROL
Y/C/J
POWER SUPPLY
TUNER/IF
DEFLECTION
AUDIO
MTS
BA6-928-A

A [POWER SUPPLY, DEFLECTION, TUNER/IF, AUDIO, MTS, TUNING CONTROL, Y-C JUNGLE]


A-1400- 226
>PF-LP<
C621
T603
FBT
T585
C629
C603
LFT
T601
F601
HOT
COLD
CN600
CN200
CN001
CN302
CN703
CN704
CN201
CN585
T605
T602
C676
C672
C617
C609
C611
C625
C450
R609
R634
R601
R699
R687
R588
R512
R514
SW515
IC604
IC602
IC600
IC633
IC468
IC401
IC404
IC545
IC561
IC565
IC603
IC608
IC001
IC002
IC003
IC004
IC590
IC600
D605
HS605
D612
D613
D640
D632
D633
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D351
D390
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D414
D435
D438
D501
D505
D506
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D514
D515
D525
Q400
Q401
Q404
Q405
Q411
Q412
Q435
Q501
Q502
Q505
Q521
Q522
Q572
Q573
Q578
Q590
Q600
Q601
Q604
Q608
Q650
Q002
Q004
Q005
Q006
Q008
Q009
Q300
Q301
Q303
Q304
Q305
Q306
Q390
Q391
Q400
Q401
Q404
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Q412
Q435
Q501
Q502
Q505
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Q522
Q572
Q573
Q578
Q590
Q600
Q601
Q604
Q608
Q650
TU101
TU VIF STF MIS
J205
J200
J202
J401
J402
J403
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J437
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J439
J440

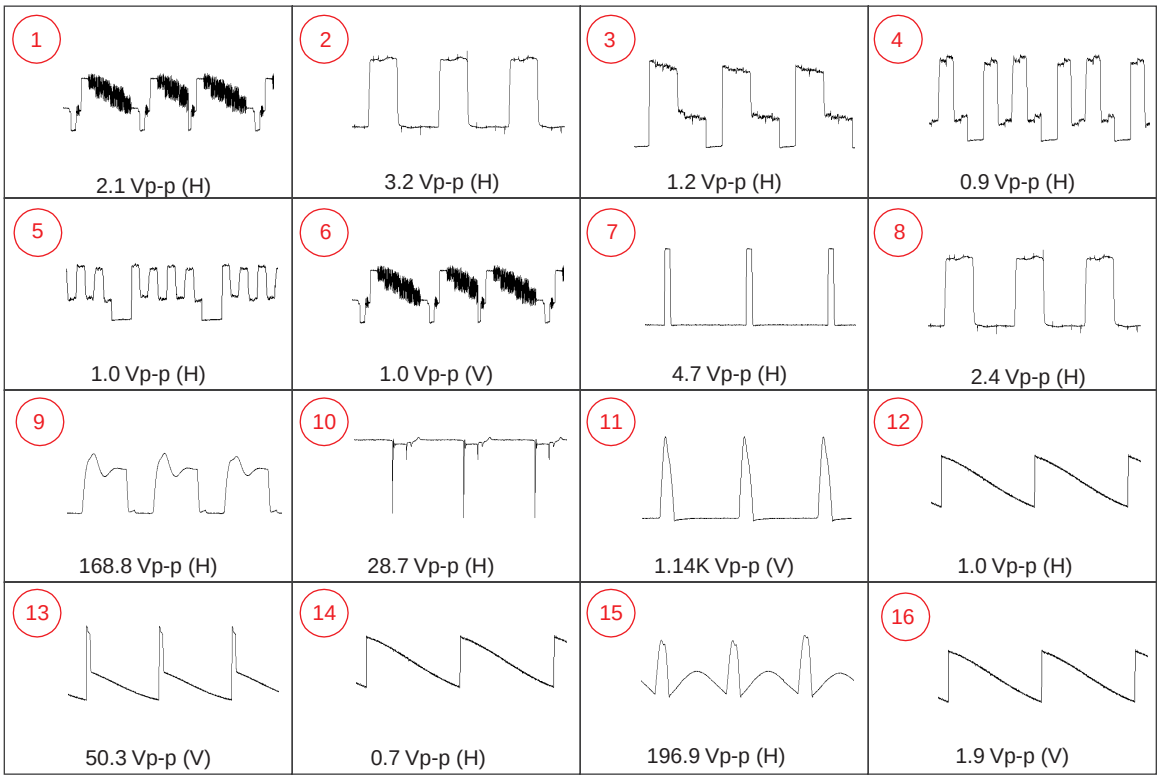
A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E		B	C	E
Q002	0.0	2.0	GND	**Q405**	0.0	0.0	GND
Q004	3.8	9.0	4.4	**Q411**	0.0	5.8	GND
Q005	5.1	0.8	5.0	**Q412**	0.1	0.1	GND
Q006	0.0	0.0	GND	**Q435**	0.0	GND	5.8
Q008	0.0	2.6	GND	**Q501**	0.0	14.3	GND
Q009	0.0	5.2	GND	**Q502**	0.0	74.1	GND
Q300	1.8	9.0	2.4	**Q505**	0.0	131.8	0.0
Q301	3.6	2.1	3.6	**Q521**	0.0	3.8	GND
Q303	3.6	GND	2.8	**Q522**	0.1	-2.1	0.0
Q304	3.6	GND	2.9	**Q572**	0.0	2.6	GND
Q305	3.6	GND	3.0	**Q573**	2.6	0.0	2.6
Q306	5.5	GND	4.9	**Q578**	0.0	0.5	GND
Q390	0.8	1.5	1.9	**Q590**	133.7	0.0	134.2
Q391	0.6	3.3	1.5	**Q604**	30.6	11.6	30.2
Q400	0.0	0.1	GND	**Q608**	0.0	6.7	GND
Q401	0.0	0.1	GND	**Q650**	5.8	9.0	5.0
Q404	0.0	0.0	GND				

All voltages are in V.

	D	G	S
Q600	157.8	0.0	-4.4
Q601	-4.4	-153.7	-158.4

A BOARD WAVEFORMS

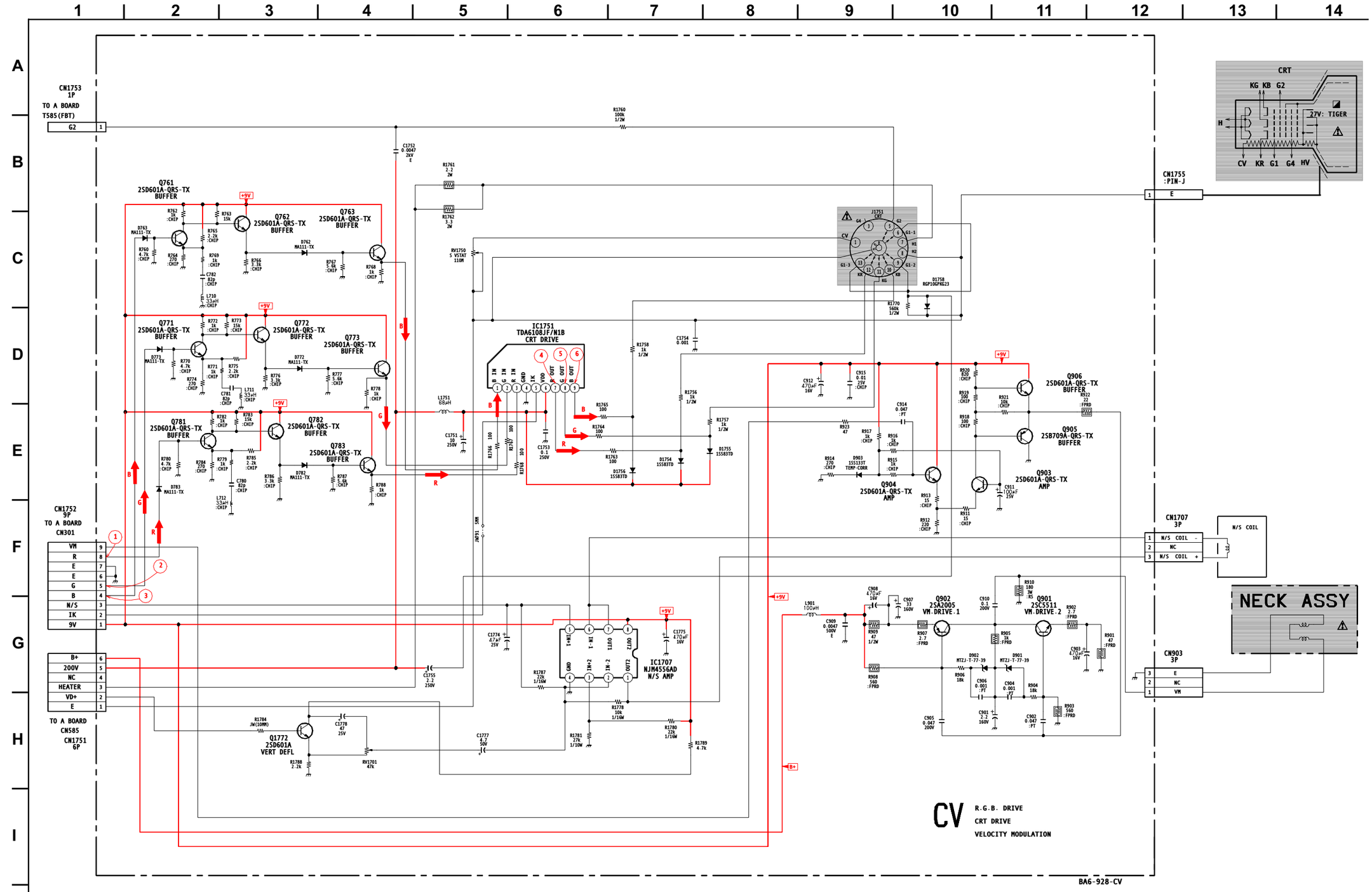


A BOARD IC VOLTAGE LIST

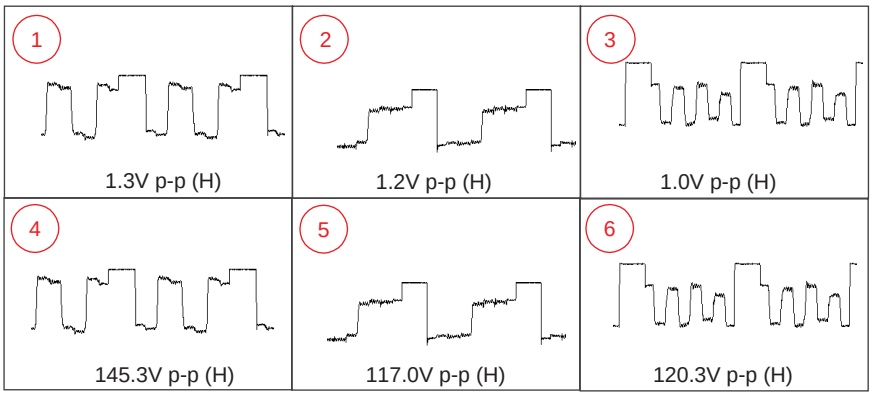
IC001		44	1.6	7	GND	12	7.0	8	-134.0
PIN	VOLT	45	1.6	8	5.0	IC545		9	-158.0
1	N/C	46	2.3	IC003		PIN	VOLT	10	-147.0
2	GND	47	1.0	PIN	VOLT	1	0.7	11	-158.0
3	2.2	48	N/C	1	N/C	2	13.5	12	-153.0
4	2.2	49	0.5	2	GND	3	-12.2	13	N/C
5	GND	50	1.2	3	GND	4	-13.3	14	6.0
6	5.0	51	2.0	4	5.0	5	0.2	15	-4.4
7	0.0	52	1.5	5	5.0	6	13.8	16	0.0
8	2.0	53	4.8	IC004		7	0.7	17	N/C
9	0.3	54	4.8	PIN	VOLT	IC561		18	158.0
10	2.1	55	4.8	1	5.0	PIN	VOLT	IC603	
11	5.0	56	4.8	2	5.0	1	0.1	PIN	VOLT
12	GND	57	N/C	3	GND	2	3.4	I	12.0
13	3.3	58	5.2	IC401		3	2.3	G	GND
14	3.1	59	0.0	PIN	VOLT	4	GND	O	9.0
15	1.0	60	0.0	1	4.5	5	9.2	IC604	
16	1.5	61	0.0	2	0.3	6	10.2	PIN	VOLT
17	3.3	62	0.0	3	4.5	7	0.1	1	133.7
18	0.5	63	1.4	4	0.3	8	13.5	2	N/C
19	1.1	64	4.9	5	4.5	IC565		3	2.5
20	GND	65	4.9	6	4.5	PIN	VOLT	4	11.3
21	0.5	66	0.0	7	0.0	1	3.4	5	GND
22	1.7	67	0.1	8	4.5	2	3.4	IC608	
23	0.5	68	0.1	9	4.5	3	2.1	PIN	VOLT
24	0.5	69	2.4	10	N/C	4	9.0	I	11.0
25	0.5	70	5.0	11	4.4	5	1.0	O	5.0
26	0.0	71	5.0	12	0.0	6	1.0	G	GND
27	0.0	72	0.1	13	4.5	7	1.0	IC633	
28	2.1	73	0.0	14	9.0	8	1.6	PIN	VOLT
29	2.7	74	5.0	15	4.4	9	1.6	I	9.0
30	3.3	75	5.0	16	GND	10	1.6	G	GND
31	2.9	76	5.0	IC404		11	GND	O	3.3
32	GND	77	0.1	PIN	VOLT	12	1.6		
33	2.8	78	0.0	1	14.6	13	1.6		
34	3.3	79	4.9	2	7.0	14	1.6		
35	2.9	80	4.9	3	GND	IC600			
36	GND	IC002		4	7.0	PIN	VOLT		
37	1.8	PIN	VOLT	5	5.9	1	-155.0		
38	0.0	1	GND	6	0.0	2	-156.0		
39	0.1	2	GND	7	GND	3	-155.0		
40	2.0	3	GND	8	0.0	4	-155.0		
41	1.6	4	GND	9	0.5	5	-158.0		
42	3.3	5	4.8	10	7.2	6	-158.0		
43	N/C	6	4.8	11	GND	7	-151.0		

All voltages are in V.

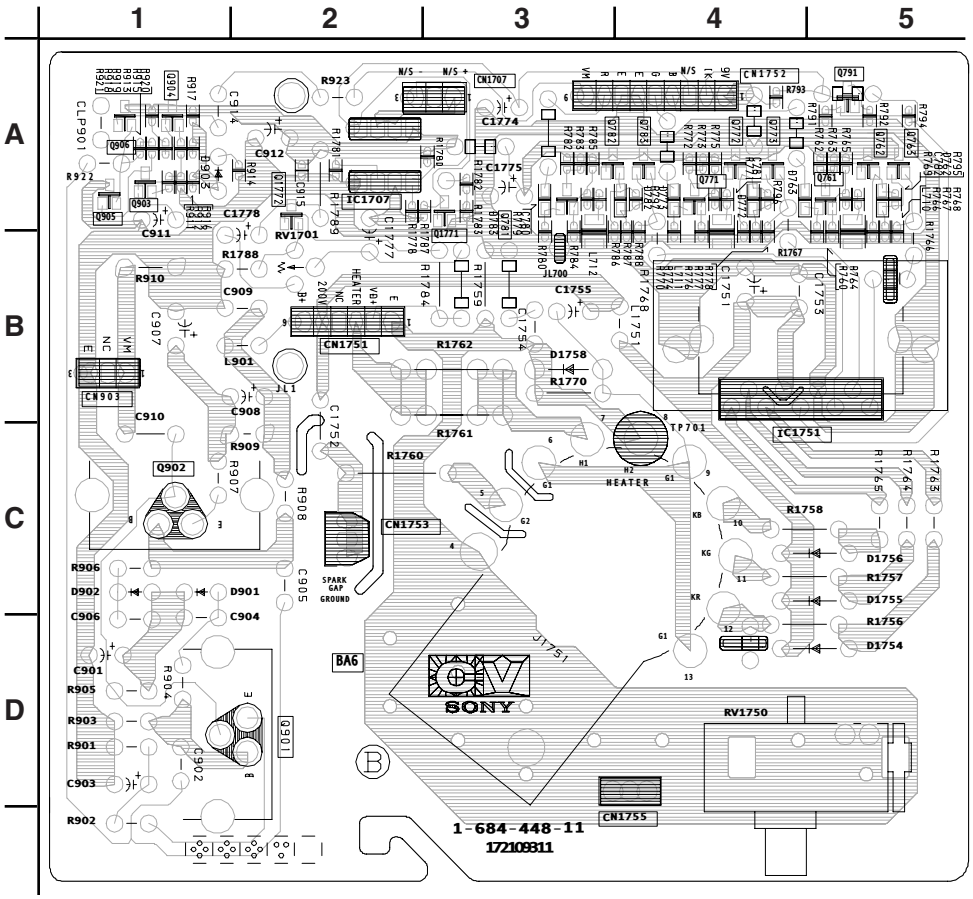
CV BOARD SCHEMATIC DIAGRAM



CV BOARD WAVEFORMS



CV [RGB DRIVE, CRT DRIVE, VELOCITY MODULATION]



CV BOARD IC VOLTAGE TABLE

IC1707	
PIN	VOLT
1	1.8
2	2.8
3	4.4
4	GND
5	4.8
6	4.8
7	4.8
8	9.0
IC1751	
PIN	VOLT
1	2.0
2	2.0
3	2.4
4	GND
5	3.7
6	200.0
7	136.0
8	142.0
9	140.0

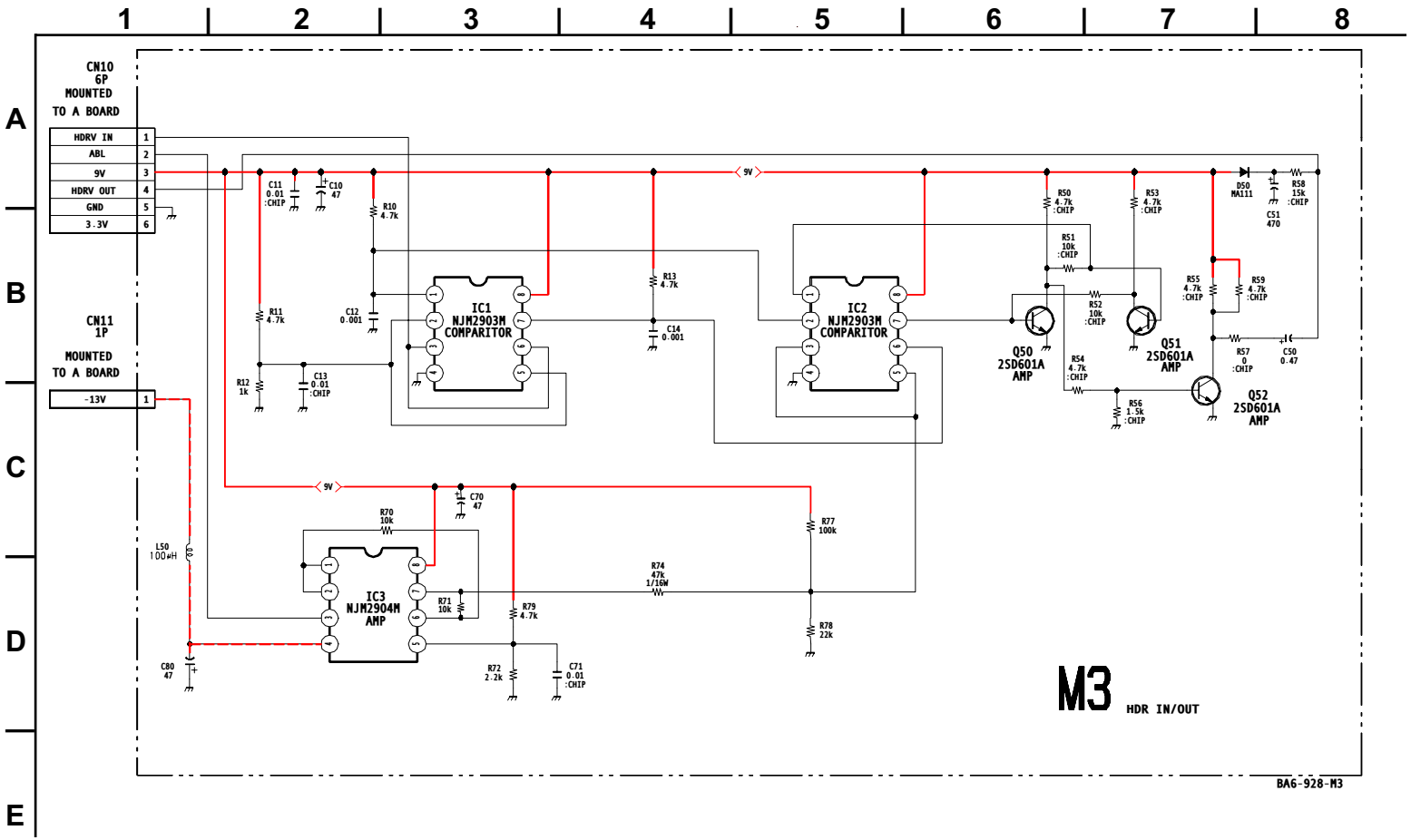
All voltages are in V.

CV BOARD TRANSISTOR TABLE

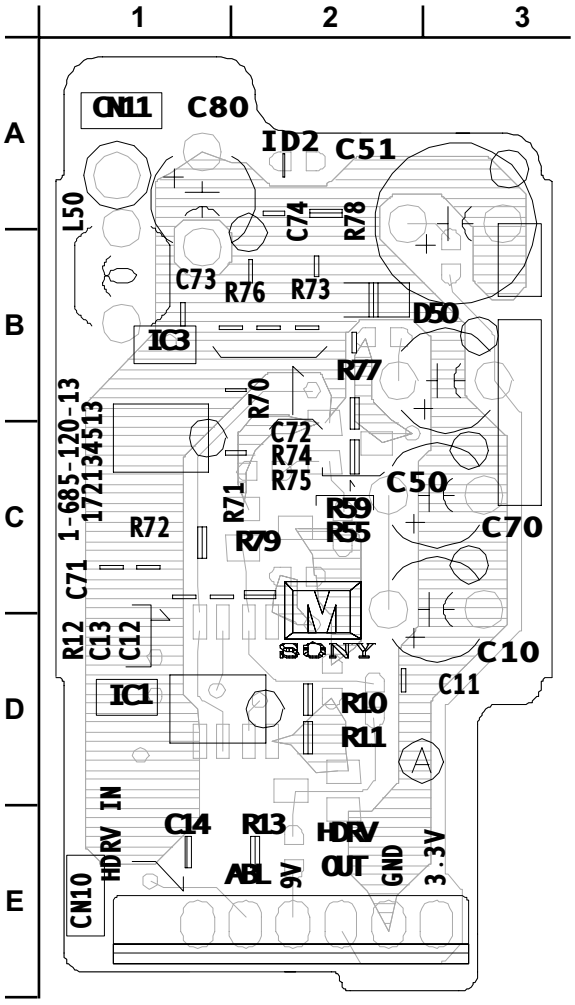
	B	C	E		B	C	E
Q761	2.2	3.8	2.9	**Q783**	2.1	9.0	2.7
Q762	3.1	9.0	3.8	**Q901**	0.9	67.0	0.4
Q763	2.0	9.0	2.6	**Q902**	134.0	67.0	134.0
Q771	2.2	3.8	2.9	**Q903**	1.8	5.4	2.4
Q772	3.2	9.0	3.8	**Q904**	1.8	9.0	2.4
Q773	2.0	9.0	2.6	**Q905**	5.7	GND	5.4
Q781	2.2	3.9	2.9	**Q906**	5.7	9.0	6.1
Q782	3.3	9.0	3.9	**Q1772**	0.0	0.0	0.0

All voltages are in V.

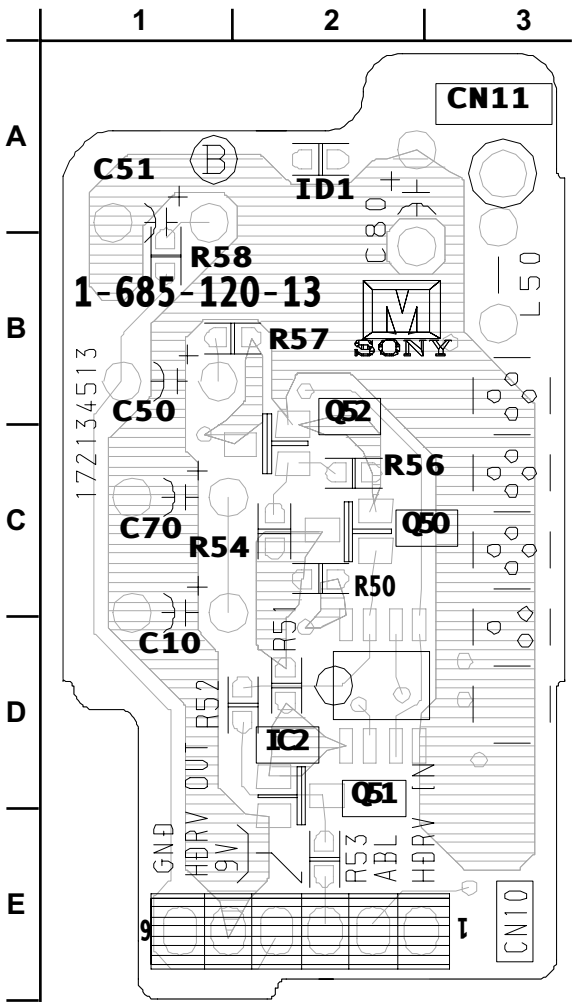
M3 BOARD SCHEMATIC DIAGRAM



M3 [HDR IN/OUT COMPONENT SIDE]

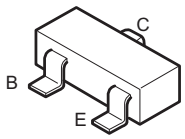


M3 [HDR IN/OUT CONDUCTOR SIDE]

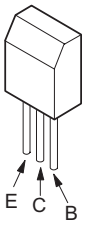


5-4. SEMICONDUCTORS

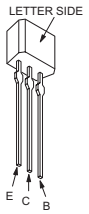
2SB709A-QRS-TX
2SD601A-QRS-TX



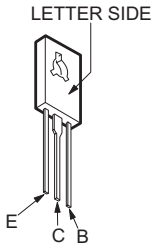
2SB734-T-34
2SC3209LK-TP



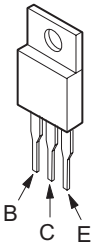
2SA1309A-QRSTA
2SC3311A-QRSTA
2SD2144S-TP-UVW



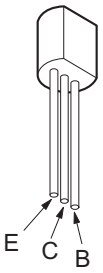
2SC3840K



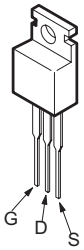
2SA1837



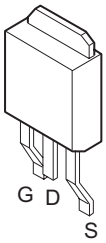
2SA1091O-TPE2



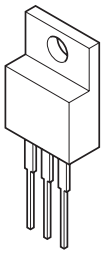
IRF614



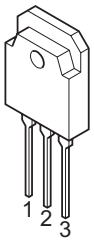
2SK2663



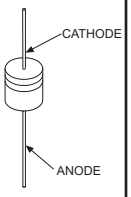
2SC4793



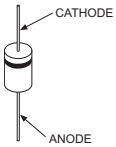
2SD2578-YB



ERA38-06TP1
ERA82-004TP5
1SS133T-77
D1NS0R-TA
MTZJ-T-77-12C
MTZJ-T-77-15B
MTZJ-T-77-33B
MTZJ-T-77-39



RU-1P
ERC06-15S
EGP20DPKG23
MTZJ-T-77-5.1C
MTZJ-T-77-5.6C
MTZJ-T-77-7.5A
MTZJ-T-77-10B
MTZJ-T-77-30D
RGP10-GPKG3
RGP02-17PKG23



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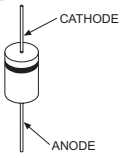
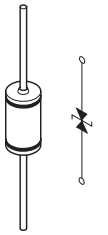
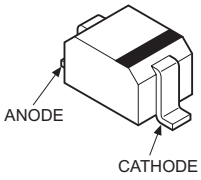
GP08DPKG23
RGP10GPKG23
RU4AM-T3



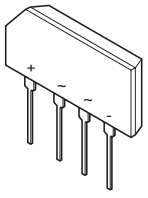
RD9.1EW-T1



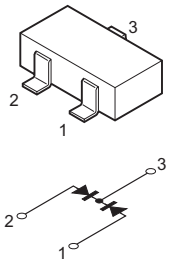
MA111-TX
UDZ-TE-17.5.1B
UDZ-TE-17.91B



D2SB60A-F04



DAP202K-T-146



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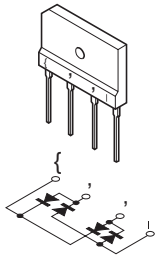
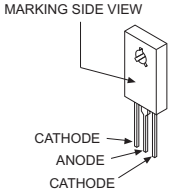
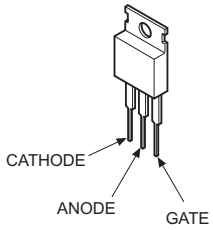


D5LC20U



TF541M



SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

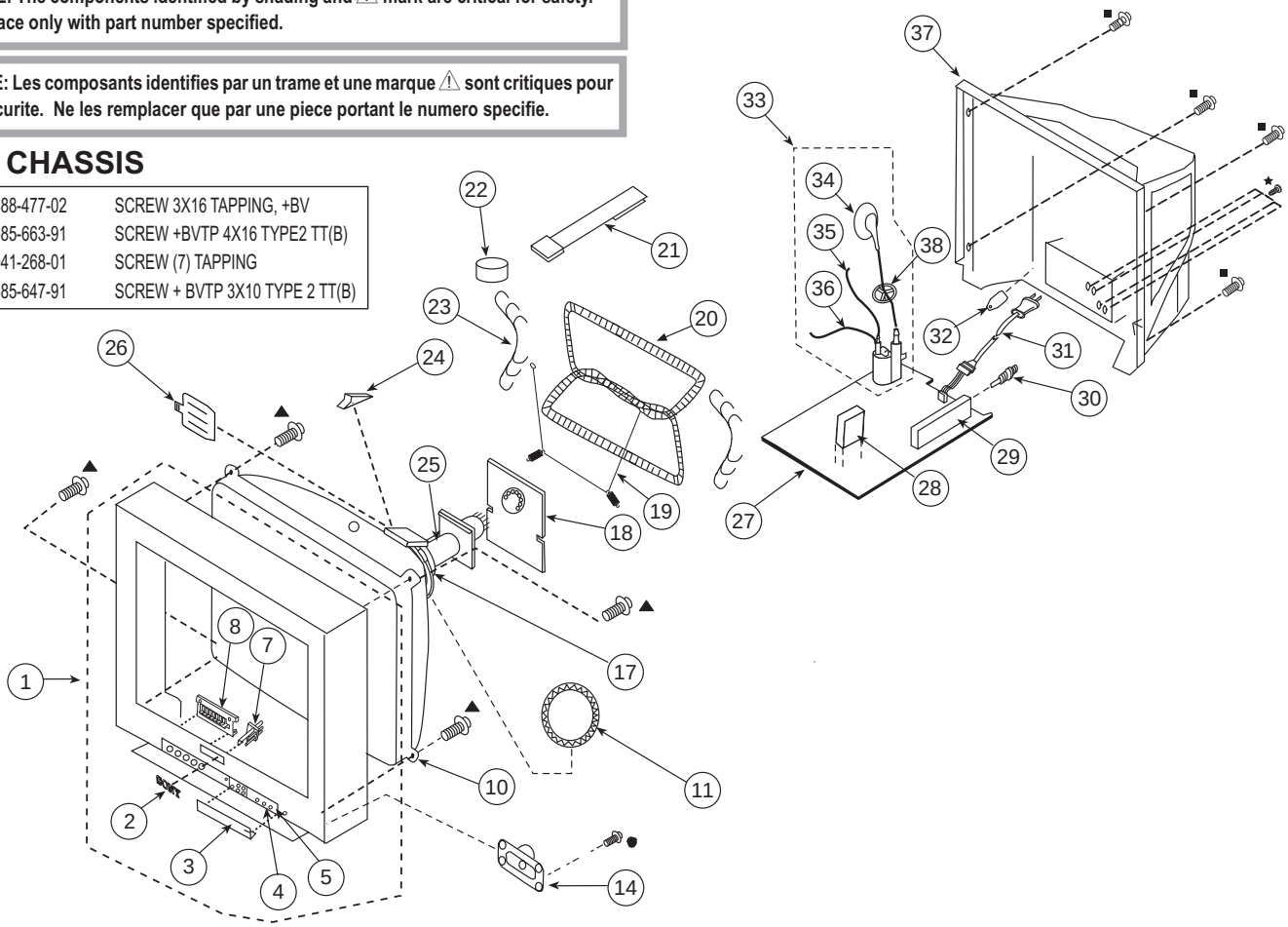
*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS

●	4-388-477-02	SCREW 3X16 TAPPING, +BV
■	7-685-663-91	SCREW +BVTP 4X16 TYPE2 TT(B)
▲	4-041-268-01	SCREW (7) TAPPING
★	7-685-647-91	SCREW + BVTP 3X10 TYPE 2 TT(B)



REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
1	X-4040-306-1	BEZNET ASSY	[2-5, 7-8]
2	4-046-160-21	EMBLEM, SONY (NO.9)	
3	4-087-194-11	DOOR, CONTROL	
4	4-074-895-32	LABEL, FRONT TERMINAL	
5	4-087-195-01	SPRING, D00R	
7	4-068-308-01	GUIDE, LED	
8	4-087-196-01	BUTTON, MULTI	
⚠ 10	8-733-250-05	CRT 25RSN (A60LPN70X)	
⚠ 11	1-452-896-11	COIL, NA ROTATION (RT200)	
14	1-825-018-11	SPEAKER (6X12CM)	
⚠ 17	1-451-475-11	DY (Y25RSA)	
* 18	A-1400-341-A	CV (VAR) BOARD, MOUNTED	
* 19	4-036-329-01	SPRING (B), TENSION	
⚠ 20	1-419-509-21	COIL, DEGAUSSING	
21	4-083-414-01	PIECE A(110), CONV CORRECT	
22	1-452-032-00	MAGNET,DISC	
* 23	4-080-810-21	BAND, DEGAUSS COIL	
24	4-053-005-01	SPACER, DY	
⚠ 25	1-451-552-11	NECK ASSEMBLY	
26	4-057-714-01	PIECE, TLH CONVERGENCE	

REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]
* 27	A-1300-477-A	A BOARD, COMPLETE 25FS100(S) (ONLY) The high-voltage leads associated with the FBT on this board are not included and must be ordered separately (SEE 34-36).	[28]
* 27	A-1300-391-A	A BOARD, COMPLETE KV-24FS100/25FS100(N) (ONLY) The high-voltage leads associated with the FBT on this board are not included and must be ordered separately (SEE 34-36).	[28]
* 28	A-1400-739-A	M3 (VAR) BOARD, MOUNTED	
⚠ 29	8-598-593-30	TUNER, FSS BTF-WA421	
⚠ 30	1-766-374-11	PLUG, F-PIN	
⚠ 31	1-757-840-12	CORD, POWER (WITH CONNECTOR) KV-25FS100(S) (ONLY)	
⚠ 31	1-824-069-11	CORD, AC KV-24FS100/25FS100(N) (ONLY)	
32	4-081-980-01	HOLDER, AC CABLE	
⚠ 33	1-453-336-11	FBT ASSY NX-4011//X4A4	[34-36]
⚠ 34	1-251-642-52	CAP ASSY, HIGH-VOLTAGE	
⚠ 35	1-900-800-65	CONNECTOR ASSY, FOCUS LEAD	
⚠ 36	1-900-803-22	WIRE ASSY, G2 LEAD	
37	4-087-192-01	COVER, REAR	
38	3-704-372-71	HOLDER, HV CABLE	

SECTION 7: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ⋈ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

When ordering parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	VALUES
A			
*	A-1300-391-A	A BOARD, COMPLETE (KV-24FS100/25FS100(N) ONLY)	
*	A-1300-477-A	A BOARD, COMPLETE (KV-25FS100(S) ONLY)	
	1-533-223-11	HOLDER, FUSE	
*	4-374-846-11	COVER,CAPACITOR, CAP TYPE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	

The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. Order the following leads when requesting this A board:

	1-251-642-52	CAP ASSY, HIGH-VOLTAGE
	1-900-800-65	CONNECTOR ASSY, FOCUS LEAD
	1-900-803-22	WIRE ASSY, G2 LEAD

CAPACITOR

C001	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C003	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C004	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C005	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C006	1-126-942-61	ELECT	1000µF	20%	25V
C007	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C008	1-126-956-91	ELECT	0.1µF	20%	50V
C009	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C010	1-126-960-11	ELECT	1µF	20%	50V
C011	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C012	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C014	1-126-960-11	ELECT	1µF	20%	50V
C015	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C019	1-126-956-91	ELECT	0.1µF	20%	50V
C021	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C022	1-126-964-11	ELECT	10µF	20%	50V
C023	1-126-935-11	ELECT	470µF	20%	16V
C033	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C041	1-126-964-11	ELECT	10µF	20%	50V
C047	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C048	1-104-665-11	ELECT	100µF	20%	25V
C049	1-126-960-11	ELECT	1µF	20%	50V
C051	1-126-964-11	ELECT	10µF	20%	50V
C052	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C053	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C054	1-126-960-11	ELECT	1µF	20%	50V
C056	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C057	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C064	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C066	1-126-947-11	ELECT	47µF	20%	25V
C074	1-126-964-11	ELECT	10µF	20%	50V
C075	1-126-935-11	ELECT	470µF	20%	16V
C076	1-104-665-11	ELECT	100µF	20%	25V
C077	1-126-947-11	ELECT	47µF	20%	25V
C079	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C080	1-128-934-91	CERAMIC CHIP	0.33µF	20%	10V
C081	1-128-934-91	CERAMIC CHIP	0.33µF	20%	10V
C090	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C091	1-126-947-11	ELECT	47µF	20%	25V
C092	1-126-947-11	ELECT	47µF	20%	25V
C094	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C095	1-126-947-11	ELECT	47µF	20%	25V
C096	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C097	1-126-947-11	ELECT	47µF	20%	25V
C098	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C099	1-126-947-11	ELECT	47µF	20%	25V
C100	1-126-956-91	ELECT	0.1µF	20%	50V
C115	1-164-739-11	CERAMIC CHIP	560pF	5%	50V
C116	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C200	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C202	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C203	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C204	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C205	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C206	1-126-963-11	ELECT	4.7µF	20%	50V
C207	1-126-963-11	ELECT	4.7µF	20%	50V
C212	1-126-933-11	ELECT	100µF	20%	16V
C213	1-126-933-11	ELECT	100µF	20%	16V
C220	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C301	1-126-956-91	ELECT	0.1µF	20%	50V
C302	1-126-956-91	ELECT	0.1µF	20%	50V
C303	1-126-956-91	ELECT	0.1µF	20%	50V
C304	1-126-956-91	ELECT	0.1µF	20%	50V
C305	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C306	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C307	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C312	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C313	1-126-956-91	ELECT	0.1µF	20%	50V
C325	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C326	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C328	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C330	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C337	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C351	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C360	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C361	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C362	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C363	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C370	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C390	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C424	1-126-960-11	ELECT	1µF	20%	50V
C440	1-126-940-11	ELECT	330µF	20%	25V
C441	1-126-940-11	ELECT	330µF	20%	25V
C450	1-126-943-11	ELECT	2200µF	20%	25V
C451	1-126-959-11	ELECT	0.47µF	20%	50V
C452	1-126-933-11	ELECT	100µF	20%	16V
C453	1-126-933-11	ELECT	100µF	20%	16V
C454	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C455	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V
C457	1-136-169-00	FILM	0.22µF	5%	50V
C458	1-136-169-00	FILM	0.22µF	5%	50V
C459	1-137-194-91	FILM	0.47µF	5%	50V
C460	1-137-194-91	FILM	0.47µF	5%	50V
C470	1-126-935-11	ELECT	470µF	20%	16V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C498	1-126-960-11	ELECT	1µF	20%	50V
C499	1-126-965-91	ELECT	22µF	20%	50V
C502	1-102-112-00	CERAMIC	330pF	10%	50V
C503	1-106-383-00	MYLAR	0.047µF	10%	200V
C504	1-102-212-00	CERAMIC	820pF	10%	500V
C505	1-102-002-00	CERAMIC	680pF	10%	500V
⚠ C506	1-162-116-00	CERAMIC	680pF	10%	2KV
⚠ C507	1-127-717-21	FILM	19000pF	3%	1.2KV
⚠ C508	1-130-895-00	FILM	0.056µF	10%	400V
C509	1-128-551-11	ELECT	22µF	20%	25V
C510	1-117-214-11	CERAMIC	0.001µF	10%	2KV
C511	1-117-813-11	FILM	0.75µF	5%	250V
C512	1-104-987-11	MYLAR	0.001µF	10%	100V
C513	1-106-383-00	MYLAR	0.047µF	10%	200V
C514	1-115-521-11	FILM	0.82µF	5%	250V
C515	1-107-651-11	ELECT	4.7µF	20%	250V
C516	1-117-661-11	FILM	0.15µF	5%	250V
C520	1-126-965-91	ELECT	22µF	20%	50V
C521	1-126-960-11	ELECT	1µF	20%	50V
C522	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C523	1-136-346-21	MYLAR	0.22µF	20%	125V
C525	1-164-646-11	CERAMIC	2200pF	10%	500V
C526	1-102-244-00	CERAMIC	220pF	10%	500V
C527	1-107-645-11	ELECT	22µF	20%	160V
C529	1-164-690-91	CERAMIC CHIP	0.0022µF	5%	50V
C534	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C536	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C537	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C539	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C542	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C544	1-126-967-11	ELECT	47µF	20%	50V
C545	1-126-969-11	ELECT	220µF	20%	50V
C546	1-137-194-81	FILM	0.47µF	5%	50V
C551	1-126-960-11	ELECT	1µF	20%	50V
C552	1-126-964-11	ELECT	10µF	20%	50V
C553	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C554	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
⚠ C561	1-126-963-11	ELECT	4.7µF	20%	50V
⚠ C562	1-104-666-11	ELECT	220µF	20%	25V
C563	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
⚠ C566	1-107-635-11	ELECT	4.7µF	20%	160V
C571	1-104-665-11	ELECT	100µF	20%	25V
C582	1-106-387-00	MYLAR	0.068µF	10%	200V
C588	1-137-417-11	MYLAR	0.0047µF	10%	200V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C589	1-128-560-11	ELECT	22µF	20%	100V
⚠	C590	1-126-964-11	ELECT	10µF	20%	50V
	C594	1-123-024-21	ELECT	33µF		160V
	C595	1-104-666-11	ELECT	220µF	20%	25V
	C597	1-104-666-11	ELECT	220µF	20%	25V
	C600	1-126-964-11	ELECT	10µF	20%	50V
⚠	C602	1-136-311-11	MYLAR	0.47µF	20%	125V
⚠	C603	1-136-311-11	MYLAR	0.47µF	20%	125V
⚠	C605	1-127-793-51	CERAMIC	2200pF	20%	250V
⚠	C606	1-127-793-51	CERAMIC	2200pF	20%	250V
	C609	1-126-942-61	ELECT	1000µF	20%	25V
	C610	1-164-644-11	CERAMIC	330pF	10%	500V
	C611	1-126-971-11	ELECT	470µF	20%	50V
	C612	1-126-961-11	ELECT	2.2µF	20%	50V
	C613	1-161-964-91	CERAMIC	0.0047µF		250V
	C614	1-161-964-91	CERAMIC	0.0047µF		250V
	C615	1-161-964-91	CERAMIC	0.0047µF		250V
	C616	1-126-943-11	ELECT	2200µF	20%	25V
	C617	1-128-564-11	ELECT	220µF	20%	100V
	C618	1-128-564-11	ELECT	220µF	20%	100V
	C619	1-161-964-91	CERAMIC	0.0047µF		250V
	C620	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
	C621	1-165-922-11	ELECT	470µF	20%	250V
	C624	1-107-636-11	ELECT	10µF	20%	160V
	C625	1-126-964-11	ELECT	10µF	20%	50V
	C629	1-165-922-11	ELECT	470µF	20%	250V
	C632	1-126-967-11	ELECT	47µF	20%	50V
	C633	1-136-479-11	FILM	0.001µF	2%	50V
	C634	1-126-947-11	ELECT	47µF	20%	25V
	C635	1-126-963-11	ELECT	4.7µF	20%	50V
	C636	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
	C637	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
	C638	1-104-665-11	ELECT	100µF	20%	25V
	C640	1-164-644-11	CERAMIC	330pF	10%	500V
	C642	1-126-969-11	ELECT	220µF	20%	50V
	C643	1-130-777-00	MYLAR	0.1µF	5%	100V
	C645	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
	C647	1-126-947-11	ELECT	47µF	20%	25V
	C648	1-162-115-00	CERAMIC	330pF	10%	1KV
	C649	1-162-115-00	CERAMIC	330pF	10%	1KV
	C650	1-126-942-61	ELECT	1000µF	20%	25V
	C651	1-126-942-61	ELECT	1000µF	20%	25V
	C652	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
	C660	1-126-947-11	ELECT	47µF	20%	25V

	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C661	1-104-665-11	ELECT	100µF	20%	25V
	C663	1-126-963-11	ELECT	4.7µF	20%	50V
	C665	1-104-665-11	ELECT	100µF	20%	25V
	C672	1-137-756-21	FILM	22000pF	3%	800V
	C680	1-127-793-51	CERAMIC	2200pF	20%	250V
	C681	1-127-793-51	CERAMIC	2200pF	20%	250V
	C690	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

CONNECTOR

*	CN001	1-560-124-00	PLUG,CONNECTOR (2.5MM)	4P
*	CN401	1-564-507-11	PLUG,CONNECTOR	4P
*	CN501	1-508-786-00	PIN,CONNECTOR (5MM PITCH)	2P
*	CN515	1-580-798-11	CONNECTOR PIN (DY)	6P
*	CN585	1-564-509-11	PLUG,CONNECTOR	6P
	CN600	1-580-843-11	PIN,CONNECTOR (POWER)	

DIODE

D001	8-719-074-84	DIODE LNK0120022G1
D002	8-719-109-89	DIODE MTZJ-T-77-5.6B
D003	8-719-110-17	DIODE MTZJ-T-77-10B
D004	8-719-110-17	DIODE MTZJ-T-77-10B
D005	8-719-110-17	DIODE MTZJ-T-77-10B
D006	8-719-921-44	DIODE MTZJ-T-77-5.1C
D044	8-719-110-17	DIODE MTZJ-T-77-10B
D045	8-719-110-17	DIODE MTZJ-T-77-10B
D050	8-719-991-33	DIODE 1SS133T-77
D051	8-719-991-33	DIODE 1SS133T-77
D052	8-719-109-89	DIODE MTZJ-T-77-5.6B
D200	8-719-929-15	DIODE RD9.1ES-T1B2
D201	8-719-929-15	DIODE MTZJ-T-77-9.1B
D202	8-719-929-15	DIODE MTZJ-T-77-9.1B
D203	8-719-929-15	DIODE MTZJ-T-77-9.1B
D204	8-719-929-15	DIODE MTZJ-T-77-9.1B
D205	8-719-929-15	DIODE MTZJ-T-77-9.1B
D230	8-719-108-12	DIODE RD9.1EW-T1
D231	8-719-108-12	DIODE RD9.1EW-T1
D232	8-719-108-12	DIODE RD9.1EW-T1
D234	8-719-108-12	DIODE RD9.1EW-T1
D235	8-719-108-12	DIODE RD9.1EW-T1
D236	8-719-108-12	DIODE RD9.1EW-T1
D237	8-719-108-12	DIODE RD9.1EW-T1
D351	8-719-109-66	DIODE MTZJ-T-77-3.3B
D390	8-719-404-50	DIODE MA111-TX
D410	8-719-404-50	DIODE MA111-TX

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REF. NO.	PART NO.	DESCRIPTION	VALUES
D412	1-216-864-11	SHORT CHIP	
D413	8-719-404-50	DIODE MA111-TX	
D414	8-719-921-63	DIODE MTZJ-T-77-7.5B	
D435	8-719-110-17	DIODE MTZJ-T-77-10B	
D438	8-719-404-50	DIODE MA111-TX	
D501	8-719-404-50	DIODE MA111-TX	
D505	8-719-081-00	DIODE BY228/A52A/	
D506	8-719-312-10	DIODE RU4AM-T3	
D508	8-719-404-50	DIODE MA111-TX	
D509	8-719-109-66	DIODE MTZJ-T-77-3.3B	
D514	8-719-908-03	DIODE GP08DPKG23	
D515	8-719-908-03	DIODE GP08DPKG23	
D525	8-719-991-33	DIODE 1SS133T-77	
D526	8-719-302-43	DIODE RGP10GPKG23	
D528	8-719-991-33	DIODE 1SS133T-77	
D545	8-719-908-03	DIODE GP08DPKG23	
D558	8-719-404-50	DIODE MA111-TX	
D559	8-719-404-50	DIODE MA111-TX	
⚠ D562	8-719-991-33	DIODE 1SS133T-77	
⚠ D566	8-719-979-84	DIODE EGP20DPKG23	
⚠ D567	8-719-991-33	DIODE 1SS133T-77	
D568	8-719-110-08	DIODE MTZJ-T-77-8.2B	
⚠ D569	8-719-921-44	DIODE MTZJ-T-77-5.1C	
D587	8-719-302-43	DIODE RGP10GPKG23	
⚠ D589	8-719-991-33	DIODE 1SS133T-77	
D596	8-719-979-85	DIODE RGP15GPKG23	
D598	8-719-979-85	DIODE RGP15GPKG23	
D605	8-719-510-53	DIODE D4SB60L-F	
D608	8-719-077-76	DIODE D2SB60A-F04	
D611	8-719-302-43	DIODE EL1Z-V1	
D612	8-719-068-00	DIODE ERC04-06SE	
	(KV-24FS100/25FS100(N) ONLY)		
D613	8-719-068-00	DIODE ERC04-06SE	
	(KV-24FS100/25FS100(N) ONLY)		
D614	8-719-057-52	DIODE EZ0150AV1	
D615	6-500-177-01	DIODE MA7D50	
D618	8-719-979-64	DIODE µF4005PKG23	
D620	8-719-911-19	DIODE 1SS119-25TD	
D621	8-719-510-37	DIODE D5LC20U	
D624	8-719-302-43	DIODE EL1Z-V1	
D628	8-719-404-50	DIODE MA111-TX	
D629	8-719-110-31	DIODE MTZJ-T-77-12B	
D630	8-719-982-22	DIODE MTZJ-T-77-30D	
D631	8-719-063-70	DIODE D1NL20U-TA2	
D650	8-719-109-89	DIODE MTZJ-T-77-5.6C	

FUSE

⚠	F601	1-576-193-11	FUSE	6.3A/125V
		(KV-24FS100/25FS100(N) ONLY)		
⚠	F601	1-532-506-51	FUSE	6.3A/250V
		(KV-25FS100(S) ONLY)		

FERRITE BEAD

FB505	1-410-397-21	FERRITE	1.1µH
FB522	1-410-397-21	FERRITE	1.1µH
FB601	1-412-911-11	FERRITE	0µH
FB602	1-412-911-11	FERRITE	0µH
FB603	1-412-911-11	FERRITE	0µH
FB604	1-412-911-11	FERRITE	0µH
FB616	1-469-578-11	FERRITE	1.1µH
FB617	1-469-578-11	FERRITE	1.1µH

FILTER

FL001	1-239-803-11	ENCAPSULATED COMPONENT

IC

⚠	IC001	6-800-842-01	IC M65582µF-100FP
	IC002	8-759-699-33	IC M24C16-MN6T(A)
	IC003	8-759-352-91	IC PST9143NL
	IC004	8-742-212-20	HYB IC SBX3081-71
	IC401	6-701-105-01	IC NJM2750M-TE2
	IC404	6-701-104-01	IC AN17820A
	IC545	8-759-980-58	IC TDA8172
⚠	IC561	8-759-700-07	IC NJM2903M-TE2
	IC565	8-759-700-44	IC NJM2902M-TE2
	IC600	8-759-670-30	IC MCZ3001D
	IC603	8-759-833-71	IC NJM2395F09
⚠	IC604	8-749-012-13	IC DM-58
	IC608	8-759-450-47	IC BA05T
	IC633	8-759-445-59	IC BA033T

JACK

J200	1-794-119-11	TERMINAL BLOCK, S	4P
J201	1-794-048-11	JACK, PIN	3P
J202	1-794-116-11	JACK BLOCK, PIN	2P
J206	1-794-117-11	JACK BLOCK, PIN	3P
J401	1-568-267-21	JACK	

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	CHIP CONDUCTOR		
JR102	1-216-864-11	SHORT CHIP	
JR128	1-216-864-11	SHORT CHIP	
JR200	1-216-864-11	SHORT CHIP	
JR301	1-216-864-11	SHORT CHIP	
JR302	1-216-864-11	SHORT CHIP	
JR303	1-216-864-11	SHORT CHIP	
JR304	1-216-864-11	SHORT CHIP	
JR305	1-216-864-11	SHORT CHIP	
JR306	1-216-864-11	SHORT CHIP	
JR307	1-216-864-11	SHORT CHIP	
JR308	1-216-864-11	SHORT CHIP	
JR309	1-216-864-11	SHORT CHIP	
JR310	1-216-864-11	SHORT CHIP	
JR311	1-216-864-11	SHORT CHIP	
JR313	1-216-864-11	SHORT CHIP	
JR314	1-216-864-11	SHORT CHIP	
JR315	1-216-864-11	SHORT CHIP	
JR316	1-216-864-11	SHORT CHIP	
JR317	1-216-864-11	SHORT CHIP	
JR318	1-216-864-11	SHORT CHIP	
JR401	1-216-864-11	SHORT CHIP	
JR500	1-216-864-11	SHORT CHIP	
JR501	1-216-864-11	SHORT CHIP	
JR502	1-216-864-11	SHORT CHIP	
JR860	1-216-864-11	SHORT CHIP	
	COIL		
L002	1-239-803-11	ENCAPSULATED COMPONENT	
L003	1-239-803-11	ENCAPSULATED COMPONENT	
L004	1-239-803-11	ENCAPSULATED COMPONENT	
L005	1-239-803-11	ENCAPSULATED COMPONENT	
L006	1-412-032-11	INDUCTOR	100µH
L007	1-412-032-11	INDUCTOR	100µH
L008	1-410-482-31	INDUCTOR	100µH
L009	1-410-482-31	INDUCTOR	100µH
L010	1-412-029-11	INDUCTOR	10µH
L101	1-414-229-11	FERRITE	0µH
L360	1-412-029-11	INDUCTOR	10µH
L361	1-412-029-11	INDUCTOR	10µH
L513	1-406-677-11	INDUCTOR	10MH
L515	1-412-552-11	INDUCTOR	2.2MH
L516	1-406-978-11	INDUCTOR	150µH

REF. NO.	PART NO.	DESCRIPTION	VALUES
L525	1-409-955-11	INDUCTOR	8MH
⚠ L588	1-412-528-81	INDUCTOR	18µH
L606	1-412-525-31	INDUCTOR	10µH
L607	1-412-525-31	INDUCTOR	10µH
L608	1-412-533-21	INDUCTOR	47µH
L609	1-412-525-31	INDUCTOR	10µH
	PHOTO COUPLER		
PH602	8-749-010-64	PHOTO COUPLER PC123FY2	
	IC LINK		
PS401	1-576-336-21	LINK, IC	
	TRANSISTOR		
Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q004	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q005	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q006	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q008	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q009	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q300	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q301	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q303	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q304	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q305	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q306	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q390	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q391	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q400	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q401	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q404	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q405	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q411	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q412	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q435	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q501	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
Q502	8-729-140-50	TRANSISTOR 2SC3209LK-TP	
⚠ Q505	6-550-041-01	TRANSISTOR 2SD2634-YB	
Q521	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA	
Q522	8-729-053-87	TRANSISTOR KTC4370A	
Q572	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q573	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q578	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
⚠ Q590	8-729-200-17	TRANSISTOR 2SA1091O-TPE2	

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q600	8-729-053-36	TRANSISTOR 2SK2640-01MR-F122			
Q601	8-729-053-36	TRANSISTOR 2SK2640-01MR-F122			
Q604	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q608	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVW			
Q650	8-729-926-14	TRANSISTOR 2SD1292			
	RESISTOR				
R001	1-216-813-11	RES-CHIP	220	5%	1/10W
R002	1-216-864-11	SHORT CHIP			
R003	1-216-821-11	RES-CHIP	1K	5%	1/10W
R004	1-216-817-11	RES-CHIP	470	5%	1/10W
R006	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R015	1-216-833-11	RES-CHIP	10K	5%	1/10W
R027	1-218-732-11	METAL CHIP	47K	0.50%	1/16W
R028	1-249-409-11	CARBON	220	5%	1/4W
R029	1-249-409-11	CARBON	220	5%	1/4W
R030	1-249-409-11	CARBON	220	5%	1/4W
R031	1-216-813-11	RES-CHIP	220	5%	1/10W
R032	1-216-813-11	RES-CHIP	220	5%	1/10W
R033	1-249-409-11	CARBON	220	5%	1/4W
R035	1-216-809-11	RES-CHIP	100	5%	1/10W
R036	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R037	1-216-833-11	RES-CHIP	10K	5%	1/10W
R038	1-216-821-11	RES-CHIP	1K	5%	1/10W
R039	1-216-815-11	RES-CHIP	330	5%	1/10W
R040	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R041	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R042	1-216-813-11	RES-CHIP	220	5%	1/10W
R043	1-216-813-11	RES-CHIP	220	5%	1/10W
R044	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R045	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R047	1-249-409-11	CARBON	220	5%	1/4W
R048	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R049	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R050	1-249-425-11	CARBON	4.7K	5%	1/4W
R051	1-249-417-11	CARBON	1K	5%	1/4W
R052	1-216-813-11	RES-CHIP	220	5%	1/10W
R053	1-249-433-11	CARBON	22K	5%	1/4W
R054	1-249-433-11	CARBON	22K	5%	1/4W
R055	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R056	1-216-833-11	RES-CHIP	10K	5%	1/10W
R057	1-249-417-11	CARBON	1K	5%	1/4W
R058	1-249-429-11	CARBON	10K	5%	1/4W
R059	1-249-417-11	CARBON	1K	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R060	1-249-409-11	CARBON	220	5%	1/4W
R061	1-249-429-11	CARBON	10K	5%	1/4W
R062	1-249-413-11	CARBON	470	5%	1/4W
R063	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R065	1-249-415-11	CARBON	680	5%	1/4W
R067	1-249-416-11	CARBON	820	5%	1/4W
R069	1-249-421-11	CARBON	2.2K	5%	1/4W
R070	1-249-409-11	CARBON	220	5%	1/4W
R071	1-249-427-11	CARBON	6.8K	5%	1/4W
R072	1-249-425-11	CARBON	4.7K	5%	1/4W
R073	1-249-419-11	CARBON	1.5K	5%	1/4W
R074	1-249-421-11	CARBON	2.2K	5%	1/4W
R075	1-249-427-11	CARBON	6.8K	5%	1/4W
R076	1-247-807-31	CARBON	100	5%	1/4W
R080	1-216-833-11	RES-CHIP	10K	5%	1/10W
R081	1-216-841-11	RES-CHIP	47K	5%	1/10W
R082	1-216-857-11	RES-CHIP	1M	5%	1/10W
R083	1-216-847-11	RES-CHIP	150K	5%	1/10W
R084	1-216-819-11	RES-CHIP	680	5%	1/10W
R085	1-216-864-11	SHORT CHIP			
R086	1-216-821-11	RES-CHIP	1K	5%	1/10W
R087	1-247-807-31	CARBON	100	5%	1/4W
R090	1-216-837-11	RES-CHIP	22K	5%	1/10W
R091	1-216-841-11	RES-CHIP	47K	5%	1/10W
R092	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R093	1-216-841-11	RES-CHIP	47K	5%	1/10W
R094	1-414-229-11	FERRITE	0µH		
R095	1-414-229-11	FERRITE	0µH		
R096	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R098	1-216-839-11	RES-CHIP	33K	5%	1/10W
R101	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R102	1-216-837-11	RES-CHIP	22K	5%	1/10W
R103	1-216-833-11	RES-CHIP	10K	5%	1/10W
R105	1-216-864-11	SHORT CHIP			
R107	1-216-809-11	RES-CHIP	100	5%	1/10W
R108	1-216-809-11	RES-CHIP	100	5%	1/10W
R109	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R110	1-249-409-11	CARBON	220	5%	1/4W
R111	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R112	1-249-425-11	CARBON	4.7K	5%	1/4W
R115	1-216-817-11	RES-CHIP	470	5%	1/10W
R116	1-216-853-11	RES-CHIP	470K	5%	1/10W
R200	1-216-841-11	RES-CHIP	47K	5%	1/10W
R202	1-216-845-11	RES-CHIP	100K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R203	1-216-845-11	RES-CHIP	100K	5%	1/10W	R371	1-216-857-11	RES-CHIP	1M	5%	1/10W
R204	1-249-437-11	CARBON	47K	5%	1/4W	R372	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R205	1-216-841-11	RES-CHIP	47K	5%	1/10W	R390	1-216-864-11	SHORT CHIP			
R206	1-216-845-11	RES-CHIP	100K	5%	1/10W	R391	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R207	1-216-845-11	RES-CHIP	100K	5%	1/10W	R392	1-216-818-11	RES-CHIP	560	5%	1/10W
R208	1-249-437-11	CARBON	47K	5%	1/4W	R393	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R209	1-249-437-11	CARBON	47K	5%	1/4W	R394	1-216-833-11	RES-CHIP	10K	5%	1/10W
R210	1-216-845-11	RES-CHIP	100K	5%	1/10W	R402	1-216-864-11	SHORT CHIP			
R211	1-249-437-11	CARBON	47K	5%	1/4W	R406	1-216-813-11	RES-CHIP	220	5%	1/10W
R212	1-249-437-11	CARBON	47K	5%	1/4W	R407	1-216-813-11	RES-CHIP	220	5%	1/10W
R213	1-216-845-11	RES-CHIP	100K	5%	1/10W	R410	1-216-864-11	SHORT CHIP			
R220	1-216-841-11	RES-CHIP	47K	5%	1/10W	R413	1-216-864-11	SHORT CHIP			
R226	1-218-285-11	RES-CHIP	75	5%	1/10W	R415	1-216-864-11	SHORT CHIP			
R227	1-218-285-11	RES-CHIP	75	5%	1/10W	R416	1-216-864-11	SHORT CHIP			
R250	1-216-864-11	SHORT CHIP				R435	1-216-833-11	RES-CHIP	10K	5%	1/10W
R251	1-216-864-11	SHORT CHIP				R436	1-216-864-11	SHORT CHIP			
R301	1-218-285-11	RES-CHIP	75	5%	1/10W	R437	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R303	1-218-285-11	RES-CHIP	75	5%	1/10W	R438	1-249-417-11	CARBON	1K	5%	1/4W
R305	1-218-285-11	RES-CHIP	75	5%	1/10W	R440	1-249-409-11	CARBON	220	5%	1/4W
R306	1-218-285-11	RES-CHIP	75	5%	1/10W	R441	1-249-409-11	CARBON	220	5%	1/4W
R307	1-218-285-11	RES-CHIP	75	5%	1/10W	R450	1-249-425-11	CARBON	4.7K	5%	1/4W
R308	1-216-821-11	RES-CHIP	1K	5%	1/10W	R455	1-216-821-11	RES-CHIP	1K	5%	1/10W
R309	1-216-833-11	RES-CHIP	10K	5%	1/10W	R456	1-216-821-11	RES-CHIP	1K	5%	1/10W
R310	1-216-821-11	RES-CHIP	1K	5%	1/10W	R457	1-216-821-11	RES-CHIP	1K	5%	1/10W
R311	1-216-813-11	RES-CHIP	220	5%	1/10W	R458	1-216-821-11	RES-CHIP	1K	5%	1/10W
R312	1-218-867-11	RES-CHIP	6.8K	5%	1/10W	R459	1-216-817-11	RES-CHIP	470	5%	1/10W
R313	1-216-864-11	SHORT CHIP				R460	1-216-817-11	RES-CHIP	470	5%	1/10W
R314	1-216-833-11	RES-CHIP	10K	5%	1/10W	R461	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R315	1-216-813-11	RES-CHIP	220	5%	1/10W	R462	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R316	1-216-825-11	RES-CHIP	2.2K	5%	1/10W	R463	1-249-437-11	CARBON	47K	5%	1/4W
R317	1-216-813-11	RES-CHIP	220	5%	1/10W	R464	1-216-841-11	RES-CHIP	47K	5%	1/10W
R318	1-216-825-11	RES-CHIP	2.2K	5%	1/10W	R477	1-216-819-11	RES-CHIP	680	5%	1/10W
R319	1-216-813-11	RES-CHIP	220	5%	1/10W	R478	1-216-833-11	RES-CHIP	10K	5%	1/10W
R320	1-216-825-11	RES-CHIP	2.2K	5%	1/10W	R479	1-216-821-11	RES-CHIP	1K	5%	1/10W
R321	1-247-807-31	CARBON	100	5%	1/4W	R484	1-216-809-11	RES-CHIP	100	5%	1/10W
R322	1-216-817-11	RES-CHIP	470	5%	1/10W	R485	1-216-809-11	RES-CHIP	100	5%	1/10W
R323	1-249-414-11	CARBON	560	5%	1/4W	R487	1-216-837-11	RES-CHIP	22K	5%	1/10W
R324	1-216-826-11	RES-CHIP	2.7K	5%	1/10W	R488	1-216-837-11	RES-CHIP	22K	5%	1/10W
R337	1-216-801-11	RES-CHIP	22	5%	1/10W	R489	1-216-805-11	RES-CHIP	47	5%	1/10W
R351	1-216-833-11	RES-CHIP	10K	5%	1/10W	R490	1-216-805-11	RES-CHIP	47	5%	1/10W
R352	1-216-853-11	RES-CHIP	470K	5%	1/10W	R494	1-216-833-11	RES-CHIP	10K	5%	1/10W
R360	1-216-809-11	RES-CHIP	100	5%	1/10W	R498	1-216-864-11	SHORT CHIP			
R361	1-216-809-11	RES-CHIP	100	5%	1/10W	R499	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R370	1-216-825-11	RES-CHIP	2.2K	5%	1/10W	R502	1-249-425-11	CARBON	4.7K	5%	1/4W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R503	1-215-919-11	METAL OXIDE	2.2K	5%	3W
R504	1-249-426-11	CARBON	5.6K	5%	1/4W
R507	1-216-833-11	RES-CHIP	10K	5%	1/10W
R510	1-260-328-11	CARBON	1K	5%	1/2W
R513	1-215-908-00	METAL OXIDE	33	5%	3W
R514	1-215-910-00	METAL OXIDE	68	5%	3W
R515	1-215-885-00	METAL OXIDE	68	5%	2W
R520	1-216-833-11	RES-CHIP	10K	5%	1/10W
R521	1-216-819-11	RES-CHIP	680	5%	1/10W
R522	1-249-411-11	CARBON	330	5%	1/4W
R524	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R525	1-215-861-00	METAL OXIDE	47	5%	1W
R526	1-216-837-11	RES-CHIP	22K	5%	1/10W
R527	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R528	1-216-816-11	RES-CHIP	390	5%	1/10W
R529	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R530	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R533	1-216-833-11	RES-CHIP	10K	5%	1/10W
R534	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R535	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R536	1-216-833-11	RES-CHIP	10K	5%	1/10W
R537	1-216-848-11	RES-CHIP	180K	5%	1/10W
R539	1-216-864-11	SHORT CHIP			
R540	1-249-429-11	CARBON	10K	5%	1/4W
R541	1-215-443-00	METAL	8.2K	1%	1/4W
R542	1-215-445-00	METAL	10K	1%	1/4W
R543	1-216-351-00	METAL OXIDE	1.5	5%	1W
R545	1-215-890-11	METAL OXIDE	470	5%	2W
R546	1-249-385-11	CARBON	2.2	5%	1/4W
R547	1-215-445-00	METAL	10K	1%	1/4W
R548	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W
R549	1-216-841-11	RES-CHIP	47K	5%	1/10W
R550	1-216-817-11	RES-CHIP	470	5%	1/10W
R553	1-216-821-11	RES-CHIP	1K	5%	1/10W
R555	1-216-833-11	RES-CHIP	10K	5%	1/10W
R557	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R560	1-216-821-11	RES-CHIP	1K	5%	1/10W
⚠ R561	1-216-833-11	RES-CHIP	10K	5%	1/10W
⚠ R562	1-249-429-11	CARBON	10K	5%	1/4W
⚠ R563	1-216-833-11	RES-CHIP	10K	5%	1/10W
⚠ R564	1-218-738-11	METAL CHIP	82K	0.50%	1/16W
⚠⋈ R565	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
⚠ R566	1-215-469-00	METAL	100K	1%	1/4W
⚠ R567	1-215-879-11	METAL OXIDE	47K	5%	1W
⚠ R568	1-215-416-00	METAL	620	1%	1/4W
R569	1-249-429-11	CARBON	10K	5%	1/4W
R570	1-249-429-11	CARBON	10K	5%	1/4W
R572	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R573	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R574	1-216-833-11	RES-CHIP	10K	5%	1/10W
R575	1-249-389-11	CARBON	4.7	5%	1/4W
R578	1-249-429-11	CARBON	10K	5%	1/4W
R581	1-249-441-11	CARBON	100K	5%	1/4W
R583	1-249-377-11	CARBON	0.47	5%	1/4W
R584	1-215-453-00	METAL	22K	1%	1/4W
R585	1-215-449-00	METAL	15K	1%	1/4W
R586	1-215-429-00	METAL	2.2K	1%	1/4W
R587	1-249-401-11	CARBON	47	5%	1/4W
R588	1-215-882-00	METAL OXIDE	22	5%	2W
⚠ R589	1-247-895-91	CARBON	470K	5%	1/4W
⚠ R590	1-249-429-11	CARBON	10K	5%	1/4W
⚠ R591	1-216-365-00	METAL OXIDE	0.47	5%	2W
⚠ R592	1-249-441-11	CARBON	100K	5%	1/4W
⚠ R593	1-249-429-11	CARBON	10K	5%	1/4W
⚠ R594	1-249-418-11	CARBON	1.2K	5%	1/4W
⚠ R595	1-247-895-91	CARBON	470K	5%	1/4W
R596	1-249-377-11	CARBON	0.47	5%	1/4W
R597	1-216-849-11	RES-CHIP	220K	5%	1/10W
R598	1-249-377-11	CARBON	0.47	5%	1/4W
R600	1-219-512-11	CARBON	2.2M	5%	1/2W
R601	1-205-998-11	CEMENTED (KV-24FS100/25FS100(N) ONLY)	1	5%	10W
R601	1-244-206-11	CEMENTED (KV-25FS100(S) ONLY)	2.2	5%	10W
R602	1-202-961-11	CEMENTED (KV-24FS100/25FS100(N) ONLY)	1.8	5%	10W
R602	1-244-206-11	CEMENTED (KV-25FS100(S) ONLY)	2.2	5%	10W
⚠ R603	1-219-513-11	CARBON (KV-24FS100/25FS100(N) ONLY)	4.7M	5%	1/2W
R604	1-216-821-11	RES-CHIP	1K	5%	1/10W
R605	1-216-833-11	RES-CHIP	10K	5%	1/10W
R606	1-216-833-11	RES-CHIP	10K	5%	1/10W
R607	1-216-857-11	RES-CHIP	1M	5%	1/10W
R608	1-215-924-00	METAL OXIDE	15K	5%	3W
R609	1-240-251-11	CEMENTED	6.8	5%	10W
R612	1-260-131-11	CARBON	470K	5%	1/2W
R614	1-216-825-11	RES-CHIP	2.2K	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	R615	1-202-933-61	FUSIBLE	0.1	10%	1/2W
	R616	1-216-821-11	RES-CHIP	1K	5%	1/10W
	R617	1-216-821-11	RES-CHIP	1K	5%	1/10W
	R619	1-249-377-11	CARBON	0.47	5%	1/4W
	R620	1-216-353-00	METAL OXIDE	2.2	5%	1W
	R625	1-216-817-11	RES-CHIP	470	5%	1/10W
	R626	1-218-715-11	METAL CHIP	9.1K	0.50%	1/16W
	R627	1-215-481-00	METAL	330K	1%	1/4W
	R628	1-260-131-11	CARBON	470K	5%	1/2W
	R629	1-215-481-00	METAL	330K	1%	1/4W
	R630	1-215-481-00	METAL	330K	1%	1/4W
	R631	1-218-718-11	METAL CHIP	12K	0.50%	1/16W
	R632	1-216-809-11	RES-CHIP	100	5%	1/10W
	R634	1-215-907-11	METAL OXIDE	22	5%	3W
	R640	1-249-417-11	CARBON	1K	5%	1/4W
	R647	1-216-811-11	RES-CHIP	150	5%	1/10W
	R650	1-249-415-11	CARBON	680	5%	1/4W
	R658	1-249-393-11	CARBON	10	5%	1/4W
	R659	1-249-393-11	CARBON	10	5%	1/4W
	R660	1-216-833-11	RES-CHIP	10K	5%	1/10W
	R667	1-216-833-11	RES-CHIP	10K	5%	1/10W
⚠	R668	1-249-418-11	CARBON	1.2K	5%	1/4W
	R670	1-216-833-11	RES-CHIP	10K	5%	1/10W
	R671	1-243-979-71	METAL OXIDE	0.1	5%	2W
	R680	1-216-864-11	SHORT CHIP			
	R687	1-202-961-11 (KV-24FS100/25FS100(N) ONLY)	CEMENTED	1.8	5%	10W
	R687	1-244-206-11 (KV-25FS100(S) ONLY)	CEMENTED	2.2	5%	10W
⚠	R699	1-218-265-11 (KV-25FS100(S) ONLY)	RES, METAL FILM	8.2M	5%	1W
	R850	1-215-451-00	METAL	18K	1%	1/4W
	R851	1-216-821-11	RES-CHIP	1K	5%	1/10W
	R862	1-216-813-11	RES-CHIP	220	5%	1/10W
			RELAY			
	RY501	1-755-198-11	RELAY			
⚠	RY600	1-755-395-11	RELAY (AC POWER)			
			SWITCH			
	S001	1-692-431-21	SWITCH TACTILE			
	S002	1-692-431-21	SWITCH TACTILE			
	S003	1-692-431-21	SWITCH TACTILE			
	S004	1-692-431-21	SWITCH TACTILE			
	S005	1-692-431-21	SWITCH TACTILE			

	REF. NO.	PART NO.	DESCRIPTION	VALUES
	S006	1-692-431-21	SWITCH TACTILE	
	S007	1-762-816-11	SWITCH TACTILE	
	S008	1-762-816-11	SWITCH TACTILE	
			SWITCH	
	SW515	1-572-707-11	SWITCH LEVER	
			TRANSFORMER	
	T505	1-433-836-11	TRANSFORMER, HORIZONTAL DRIVE	
	T510	1-437-610-11	TRANSFORMER, FERRITE (PMT)	
⚠	T511	1-433-850-11	TRANSFORMER, HORIZONTAL LINEAR	
⚠	T585	1-453-336-11	FBT ASSY NX-4011//X4A4	
⚠	T601	1-435-617-11 (KV-24FS100/25FS100(N) ONLY)	TRANSFORMER, LINE FILTER	
⚠	T601	1-426-717-11 (KV-25FS100(S) ONLY)	TRANSFORMER, LINE FILTER	
⚠	T602	1-435-675-11 (KV-24FS100/25FS100(N) ONLY)	TRANSFORMER, STANDBY	
⚠	T602	1-435-676-11 (KV-25FS100(S) ONLY)	TRANSFORMER, STANDBY	
⚠	T603	1-437-611-11	TRANSFORMER, CONVERTER	
			THERMISTOR	
	THP501	1-809-539-11 (KV-24FS100/25FS100(N) ONLY)	THERMISTOR, POSITIVE	
	THP501	1-803-540-11 (KV-25FS100(S) ONLY)	THERMISTOR, POSITIVE	
			TUNER	
⚠	TU101	8-598-593-30	TUNER, FSS BTF-WA421	
			VARISTOR	
	VDR600	1-803-585-11 (KV-24FS100/25FS100(N) ONLY)	VARISTOR ENE271D-10A	
	VDR600	1-803-967-11 (KV-25FS100(S) ONLY)	VARISTOR ENE271D-10A	
			CRYSTAL	
	X001	1-795-006-21	OSCILLATOR, CRYSTAL	
	X301	1-781-377-11	VIBRATOR, CRYSTAL	

M3 CV

REF. NO.	PART NO.	DESCRIPTION	VALUES		
M3					
*	**A-1400-739-A**	**M3 (VAR) BOARD, MOUNTED**			
	CAPACITOR				
C10	1-126-947-11	ELECT	47µF	20%	25V
C11	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C12	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C13	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C14	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C50	1-126-959-11	ELECT	0.47µF	20%	50V
C51	1-126-935-11	ELECT	470µF	20%	16V
C70	1-126-947-11	ELECT	47µF	20%	25V
C71	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C80	1-126-947-11	ELECT	47µF	20%	25V
	CONNECTOR				
* CN10	1-816-567-11	HEADER,CONNECTOR 6P			
	DIODE				
D50	8-719-404-50	DIODE MA111-TX			
	IC				
IC1	8-759-700-07	IC NJM2903M-TE2			
IC2	8-759-700-07	IC NJM2903M-TE2			
IC3	8-759-701-01	IC NJM2904M(TE2)			
	CHIP CONDUCTOR				
JR1	1-216-864-11	SHORT CHIP			
JR2	1-216-864-11	SHORT CHIP			
JR6	1-216-864-11	SHORT CHIP			
JR7	1-216-864-11	SHORT CHIP			
JR12	1-216-864-11	SHORT CHIP			
JR44	1-216-864-11	SHORT CHIP			
	COIL				
L50	1-408-615-31	INDUCTOR	100µH		
	TRANSISTOR				
Q50	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q51	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q52	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R10	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R11	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R12	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R13	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R50	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R51	1-216-833-11	RES-CHIP	10K	5%	1/10W
R52	1-216-833-11	RES-CHIP	10K	5%	1/10W
R53	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R54	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R55	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R56	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R57	1-216-864-11	SHORT CHIP			
R58	1-216-835-11	RES-CHIP	15K	5%	1/10W
R59	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R70	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R71	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R72	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R74	1-218-732-11	METAL CHIP	47K	0.50%	1/16W
R77	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R78	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R79	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
CV					
*	**A-1400-341-A**	**CV (VAR) BOARD, MOUNTED**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	CAPACITOR				
C780	1-162-926-11	CERAMIC CHIP	82pF	5%	50V
C781	1-162-926-11	CERAMIC CHIP	82pF	5%	50V
C782	1-162-926-11	CERAMIC CHIP	82pF	5%	50V
C901	1-107-667-11	ELECT	2.2µF	20%	160V
C902	1-130-491-00	MYLAR	0.047µF	5%	50V
C903	1-126-935-11	ELECT	470µF	20%	16V
C904	1-130-471-00	MYLAR	0.001µF	5%	50V
C905	1-106-383-00	MYLAR	0.047µF	10%	200V
C906	1-130-471-00	MYLAR	0.001µF	5%	50V
C907	1-107-638-11	ELECT	33µF	20%	160V
C908	1-126-935-11	ELECT	470µF	20%	16V
C909	1-161-830-00	CERAMIC	0.0047µF		500V
C910	1-104-999-11	MYLAR	0.1µF	10%	200V
C911	1-104-665-11	ELECT	100µF	20%	25V
C912	1-126-935-11	ELECT	470µF	20%	16V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C914	1-130-491-00	MYLAR	0.047µF	5%	50V
C915	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C1751	1-107-652-11	ELECT	10µF	20%	250V
C1752	1-162-114-00	CERAMIC	0.0047µF		2KV
C1753	1-137-528-11	MYLAR	0.1µF	10%	250V
C1754	1-102-074-00	CERAMIC	0.001µF	10%	50V
C1755	1-107-649-11	ELECT	2.2µF	20%	250V
C1774	1-126-947-11	ELECT	47µF	20%	25V
C1775	1-126-935-11	ELECT	470µF	20%	16V
C1777	1-126-963-11	ELECT	4.7µF	20%	50V
C1778	1-126-947-11	ELECT	47µF	20%	25V
	CONNECTOR				
CN903	1-564-506-11	PLUG,CONNECTOR	3P		
CN1707	1-564-506-11	PLUG,CONNECTOR	3P		
CN1751	1-564-509-11	PLUG,CONNECTOR	6P		
* CN1752	1-564-512-11	PLUG,CONNECTOR	9P		
CN1753	1-785-879-11	CONNECTOR, ONE TOUCH			
CN1755	1-695-915-11	TAB (CONTACT)			
	DIODE				
D762	8-719-404-50	DIODE MA111-TX			
D763	8-719-404-50	DIODE MA111-TX			
D772	8-719-404-50	DIODE MA111-TX			
D773	8-719-404-50	DIODE MA111-TX			
D782	8-719-404-50	DIODE MA111-TX			
D783	8-719-404-50	DIODE MA111-TX			
D901	8-719-110-86	DIODE MTZJ-T-77-39			
D902	8-719-110-86	DIODE MTZJ-T-77-39			
D903	8-719-991-33	DIODE 1SS133T-77			
D1754	8-719-901-83	DIODE 1SS83TD			
D1755	8-719-901-83	DIODE 1SS83TD			
D1756	8-719-901-83	DIODE 1SS83TD			
D1758	8-719-302-43	DIODE RGP10GPKG23			
	IC				
IC1707	8-759-356-16	IC NJM4556AD			
IC1751	8-759-562-43	IC TDA6108JF/N1B			
	COIL				
L710	1-410-387-11	INDUCTOR	33µH		
L711	1-410-387-11	INDUCTOR	33µH		
L712	1-410-387-11	INDUCTOR	33µH		
L901	1-408-615-31	INDUCTOR	100µH		
L1751	1-408-613-31	INDUCTOR	68µH		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	TRANSISTOR				
Q761	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q762	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q763	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q771	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q772	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q773	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q781	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q782	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q783	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q901	8-729-045-04	TRANSISTOR 2SC5511			
Q902	8-729-045-05	TRANSISTOR 2SA2005			
Q903	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q904	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q905	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q906	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q1772	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
	RESISTOR				
R760	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R762	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R763	1-216-835-11	RES-CHIP	15K	5%	1/10W
R764	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R765	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R766	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R767	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R768	1-216-821-11	RES-CHIP	1K	5%	1/10W
R769	1-216-821-11	RES-CHIP	1K	5%	1/10W
R770	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R771	1-216-821-11	RES-CHIP	1K	5%	1/10W
R772	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R773	1-216-835-11	RES-CHIP	15K	5%	1/10W
R774	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R775	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R776	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R777	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R778	1-216-821-11	RES-CHIP	1K	5%	1/10W
R779	1-216-821-11	RES-CHIP	1K	5%	1/10W
R780	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R782	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R783	1-216-835-11	RES-CHIP	15K	5%	1/10W
R784	1-218-678-11	METAL CHIP	270	0.50%	1/16W
R785	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R786	1-216-827-11	RES-CHIP	3.3K	5%	1/10W

CV

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R787	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R788	1-216-821-11	RES-CHIP	1K	5%	1/10W
R901	1-249-401-11	CARBON	47	5%	1/4W
R902	1-249-386-11	CARBON	2.7	5%	1/4W
R903	1-249-414-11	CARBON	560	5%	1/4W
R904	1-249-432-11	CARBON	18K	5%	1/4W
R905	1-249-417-11	CARBON	1K	5%	1/4W
R906	1-249-432-11	CARBON	18K	5%	1/4W
R907	1-249-386-11	CARBON	2.7	5%	1/4W
R908	1-249-414-11	CARBON	560	5%	1/4W
R909	1-260-312-11	CARBON	47	5%	1/2W
R910	1-216-476-11	METAL OXIDE	180	5%	3W
R911	1-216-799-11	RES-CHIP	15	5%	1/10W
R912	1-216-813-11	RES-CHIP	220	5%	1/10W
R913	1-216-799-11	RES-CHIP	15	5%	1/10W
R914	1-216-814-11	RES-CHIP	270	5%	1/10W
R915	1-216-821-11	RES-CHIP	1K	5%	1/10W
R916	1-216-821-11	RES-CHIP	1K	5%	1/10W
R917	1-216-821-11	RES-CHIP	1K	5%	1/10W
R918	1-216-809-11	RES-CHIP	100	5%	1/10W
R919	1-216-809-11	RES-CHIP	100	5%	1/10W
R920	1-216-820-11	RES-CHIP	820	5%	1/10W
R921	1-216-833-11	RES-CHIP	10K	5%	1/10W
R922	1-249-397-11	CARBON	22	5%	1/4W
R923	1-249-401-11	CARBON	47	5%	1/4W
R1756	1-260-328-11	CARBON	1K	5%	1/2W
R1757	1-260-328-11	CARBON	1K	5%	1/2W
R1758	1-260-328-11	CARBON	1K	5%	1/2W
R1760	1-260-123-11	CARBON	100K	5%	1/2W
R1761	1-216-373-11	METAL OXIDE	2.2	5%	2W
R1762	1-216-375-00	METAL OXIDE	3.3	5%	2W
R1763	1-247-807-31	CARBON	100	5%	1/4W
R1764	1-247-807-31	CARBON	100	5%	1/4W
R1765	1-247-807-31	CARBON	100	5%	1/4W
R1766	1-247-807-31	CARBON	100	5%	1/4W
R1767	1-247-807-31	CARBON	100	5%	1/4W
R1768	1-247-807-31	CARBON	100	5%	1/4W
R1770	1-260-132-11	CARBON	560K	5%	1/2W
R1778	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1780	1-216-837-11	RES-CHIP	22K	5%	1/10W
R1781	1-216-838-11	RES-CHIP	27K	5%	1/10W
R1787	1-216-837-11	RES-CHIP	22K	5%	1/10W
R1788	1-249-421-11	CARBON	2.2K	5%	1/4W
R1789	1-249-425-11	CARBON	4.7K	5%	1/4W

VARIABLE RESISTOR

RV1701	1-238-019-11	RES, ADJ, CARBON	47K
RV1750	1-241-656-11	RES, ADJ, METAL FILM	110M

ACCESSORIES AND PACKING

	1--501-730-41	ANTENNA, TELESCOPIC (KV-25FS100 ONLY)
	1-417-182-11	CONVERTER (EAC-25) (KV-25FS100 ONLY)
*	4-041-255-01	BAG, PROTECTION
	4-086-340-22	MANUAL, INSTRUCTION (KV-24FS100 ONLY)
	4-086-340-32	MANUAL, INSTRUCTION (KV-24FS100 (CND) ONLY)
	4-086-342-42	MANUAL, INSTRUCTION (KV-25FS100 ONLY)
*	4-088-022-01	CARTON
*	4-088-023-01	CUSHION, UPPER
*	4-088-024-01	CUSHION, LOWER

REMOTE COMMANDERS

1-477-119-21	REMOTE COMMANDER (RM-Y173)
3-709-322-31	COVER, BATTERY (FOR RM-Y173)

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
2002EJ74WEB-1
Printed in USA
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9-965-928-04

SERVICE MANUAL

BA-6 CHASSIS

In an effort to reduce the size of this pdf file the tiled schematics are not attached to this Service Manual. To receive a complete set of the tiled schematics for this manual please submit a request to Nita Wardlaw at nita.wardlaw@am.sony.com.

SONY

4-086-340-**22**

FD Trinitron

WEGA®

Operating Instructions

KV-13FS100
KV-13FS110
KV-20FS100
KV-24FS100

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WARNING

To reduce the risk of fire or electric shock, do not expose the TV to rain or moisture.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to the CATV Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

SAFETY PRECAUTIONS

- ❏ Operate the TV only on 120 V AC.
- ❏ One blade of the power plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- ❏ If any liquid or solid object falls into the TV, unplug it and have it checked by qualified personnel before operating it further.

CAUTION

When using TV games, computers, and similar products with your TV, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. Continuously watching the same channel can cause the imprint of station logos onto the TV screen. These types of imprints are not covered by your warranty because they are the results of misuse.

To reduce the risk of electric shock, do not use this polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted to prevent blade exposure.

✍ You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❏ Reorient or relocate the receiving antennas.
- ❏ Increase the separation between the equipment and receiver.
- ❏ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❏ Consult the dealer or an experienced radio/TV technician for help.

Protecting the TV

- ❏ To prevent internal heat build-up, do not block the ventilation openings.
- ❏ Do not install the TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with § 15.119 of the FCC rules.

Use of this television for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster-cable company and/or program owner.

Owner's Record

The model and serial numbers are located on the front cover of this manual and at the rear of your TV.

Trademarks and Copyrights

ENERGY STAR® is a registered mark.

As an ENERGY STAR® Partner, Sony has determined that this product or product model meets the ENERGY STAR® guidelines for energy efficiency.

IMPORTANT SAFEGUARDS

For your protection, please read these instructions completely, and keep this manual for future reference. Carefully observe and comply with all warnings, cautions and instructions placed on the set, or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use, and servicing of the set.

Use

Power Sources

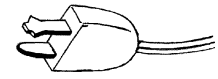
This set should be operated only from the type of power source indicated on the serial/ model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.

Grounding or Polarization

This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding).
Refer to the following instructions:

For the set with a polarized AC power cord plug

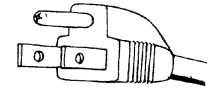
This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.



Alternate Warning

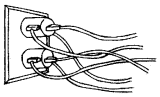
For the set with a three-wire grounding type AC plug

This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.



Overloading

Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock. Always turn the set off when it is not to be used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.



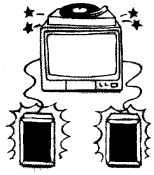
Do not disconnect the antenna or the power cord during a heavy storm. Lightning may strike while you are holding the cable or cord, causing serious injury. Turn off your TV and wait for the weather to improve.

Object and Liquid Entry

Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.

Attachments

Do not use attachments not recommended by the manufacturer, as they may cause hazards.

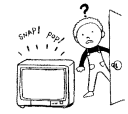


Do not place any objects, especially heavy objects, on top of the set. The object may fall from the set, causing injury.

Cleaning

Unplug the set from the wall outlet before cleaning or polishing it. Do not use liquid cleaners or aerosol cleaners. Use a cloth lightly dampened with water for cleaning the exterior of the set.

If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.

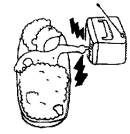


Installation

Always use two or more people to lift or move the set. The set is heavy and the bottom surface is flat. Serious injury can result from trying to move the set by yourself alone, or from unsteady handling. Install the set on a stable, level surface.

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



Accessories

Do not place the set on an unstable cart, stand, tripod, bracket, table, or shelf. The set may fall, causing serious injury to a child or an adult, and serious damage to the set. Use only a cart or stand recommended by the manufacturer for the specific model of TV. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

Disconnect all cables and cords from the set before attempting to move the set.

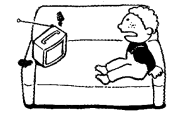
Do not allow children or pets to climb up onto, or push against, the set. The set may fall, causing serious injury.

Ventilation

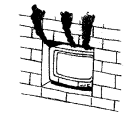
The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.

- **Never cover the slots and openings with a cloth or other materials.**

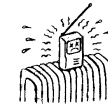
- **Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.**



- **Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.**



- **Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.**



Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.

Grounding or Polarization

This set may be equipped with a polarized alternating current line plug (a plug having one blade wider than other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Antennas

Outdoor Antenna Grounding

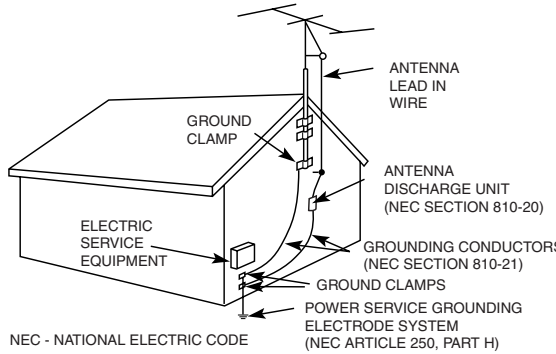
If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INVARIABLY FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the NEC

Antenna Grounding According to the National Electrical Code, ANSI/NFPA 70.



Lightning

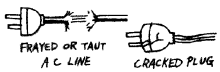
For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

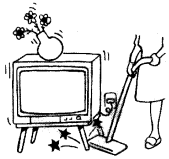
Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- **When the power cord or plug is damaged or frayed.**



- **If liquid has been spilled into the set or objects have fallen into the product.**



- **If the set has been exposed to rain or water.**

- **If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.**

- **If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.**

- **When the set exhibits a distinct change in performance — this indicates a need for service.**

Servicing

Do not attempt to service the set yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.

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Introduction

Congratulations on your purchase of the Sony FD Trinitron WEGA®. Before you begin using this manual, please check the model number located on the rear of your TV or on the front cover of this manual.

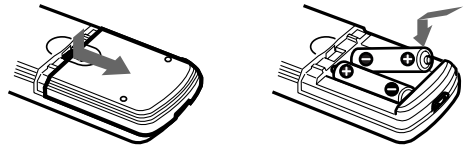
Introducing the FD Trinitron WEGA® Features

Some of the features you will enjoy include:

- **FD Trinitron FLAT CRT** — Technologically advanced tube delivers a picture with uncompromising accuracy and outstanding image detail.
- **Y, P_B, P_R Inputs** — A component video input connection for a superior picture quality.
- **Parental Control (V-Chip)** — A tool to help parents monitor what their children watch on TV by establishing rating limits.
- **Favorite Channels** — Instant access to your favorite channels with the touch of a button.
- **Energy Star®** — A recognized symbol of energy efficiency.
- **Direct MTS** — Allows direct access for changing your Multi-Channel TV Sound: Stereo, Mono, or Auto SAP (Second Audio Program) with the touch of a button.
- **Trilingual Menus** — Choose between English, French, or Spanish menus.
- **Front Panel Controls** — Allows access to the on-screen menus without the use of a remote control.
- **Front A/V Inputs** — A quick connection for video games, camcorders, stereo/mono equipment, or headphones.
- **Auto Mute** — A friendly feature designed to automatically mute your TV when no signal is received.

Batteries for the Remote Control

Insert two AA (R6) batteries (supplied) into the remote control using the following illustration as a guide.



✍ Under normal conditions, batteries will last up to six months. If the remote control does not operate properly, the batteries might be worn out.

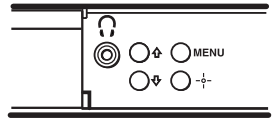
✍ If you will not be using the remote control for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

About this Manual

This manual provides instructions to help you enjoy your new TV. It shows you how to connect to an antenna or cable, cable box, VCR, DVD, satellite receiver, stereo system, or camcorder. Once you're connected, follow the instructions and use the remote control to access the on-screen menus.

✍ The TV front and rear panels illustrated in this manual are for KV-24FS100. The front and rear panels on your TV may not look exactly like those illustrated.

Front Panel Menu Controls



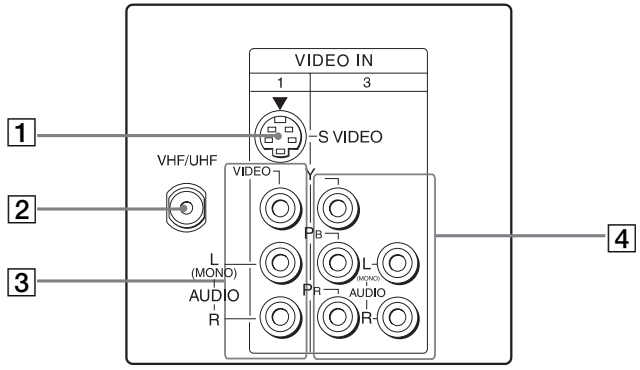
The front Audio/Video panel controls allows you to access the menu without the remote control. Press MENU to display the on-screen menu. Use the ⊕ and ⊖ buttons on the front Audio/Video panel instead of the ⇧ and ⇩ buttons on the remote control. Use the ⊕ button on the front Audio/Video panel instead of the ⇦, ⇨, and ⊕ buttons on the remote control. Press MENU again when the setting or adjustment is complete.

✍ To navigate the menus with your remote control, see "Using the Menus" on page 17.

Connecting Your TV

Read this section before setting up your TV for the first time. This section covers basic connections in addition to any optional equipment you may be connecting.

TV Rear Panel



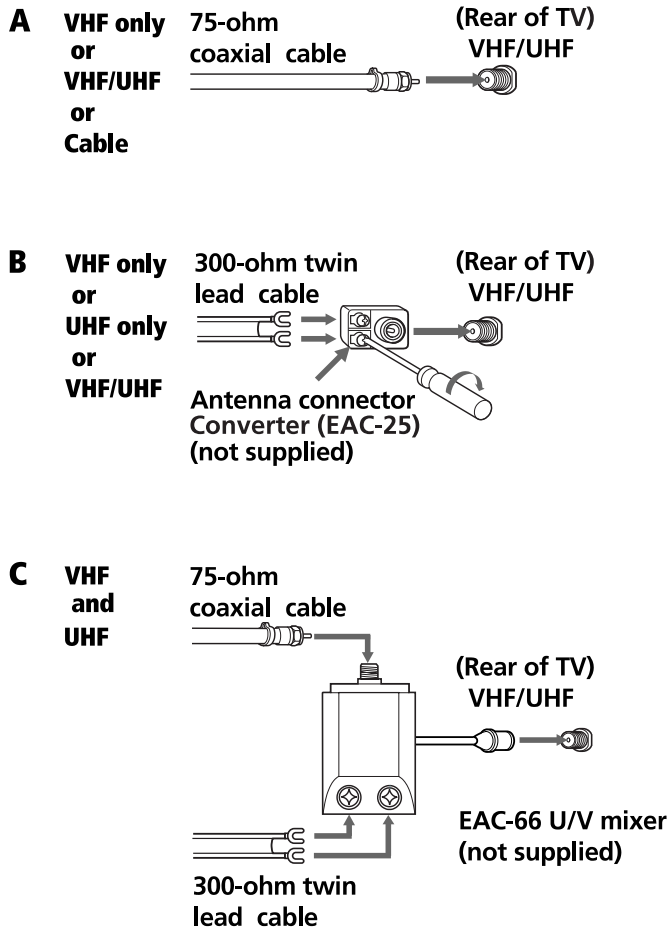
Jack	Description
1 **S VIDEO**	Connects to the S VIDEO OUT jack on your VCR or other video equipment that has S VIDEO. S VIDEO provides better picture quality than the VHF/UHF jacks or the video input jack. S VIDEO does not provide sound; the audio cables must still be connected.
2 **VHF/UHF**	Connects to your VHF/UHF antenna or cable.
3 **VIDEO/ AUDIO (L/R)**	Connects to the AUDIO and VIDEO output jacks on your VCR or other video equipment. A second video input jack (VIDEO 2) is located on the front panel of the TV. These AUDIO/VIDEO input jacks provide better picture quality than the VHF/UHF jack.
4 **Y, P_B, P_R/ L, R**	Connects to the component video Y, P_B, P_R to AUDIO L and R output jacks on your DVD player or Digital Set-top box.

✍ The rear panels illustrated in this manual are for KV-24FS100. The rear panels on your TV may not look exactly like those illustrated.

Basic Connections

TV with indoor or outdoor antenna, or CATV cable

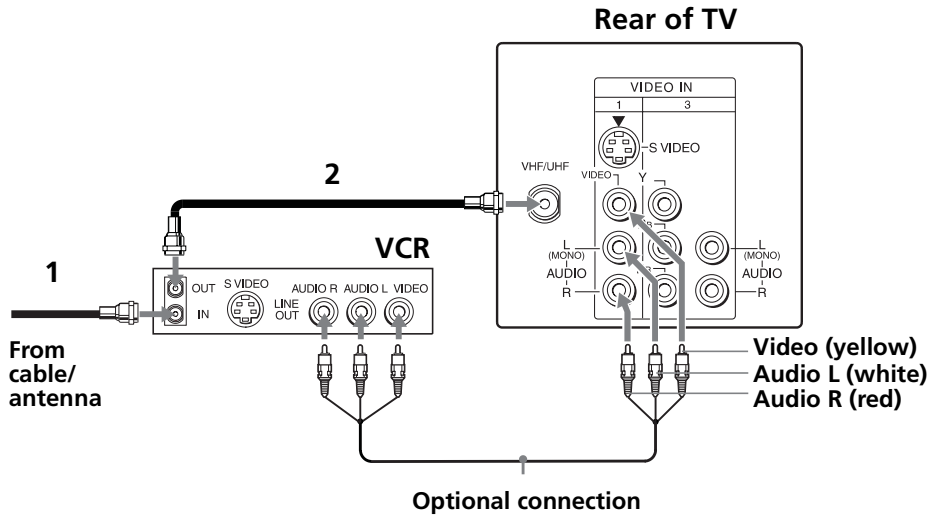
Depending on the cable available in your home, choose one of the connections below:



✍ If you are connecting to an indoor or outdoor antenna, you may need to adjust the orientation of the antenna for best reception.

Connecting Additional Equipment

TV and VCR



✍ To watch video programs from your VCR, tune your TV to channel 3 or 4 (as set on the rear of your VCR).

1 Connect the coaxial cable from your TV antenna or cable service to the IN jack on your VCR.

2 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF jack on the TV.

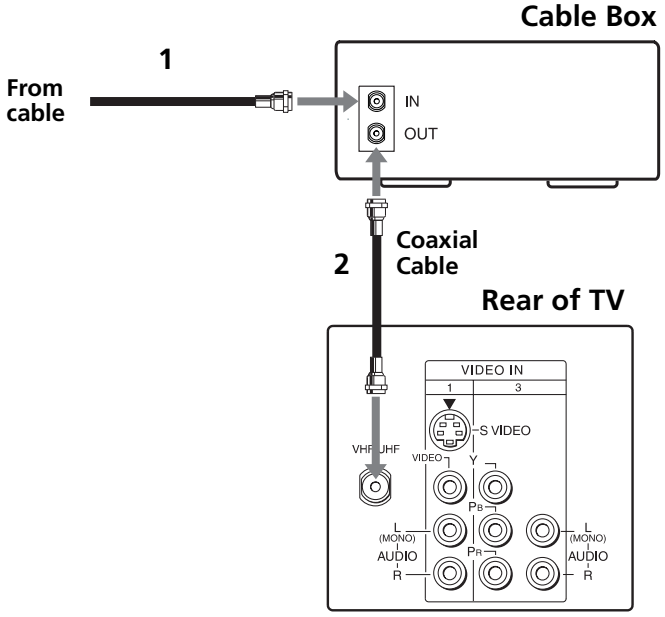
Optional connection

If your VCR is equipped with video outputs, you can get better picture quality by connecting Audio/Video cables (not supplied) from AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV.

✍ You can use the TV/VIDEO button to switch between the VHF/UHF and VIDEO inputs.

✍ For better picture quality, use S VIDEO instead of the yellow Audio/ Video cable. S VIDEO does not provide sound; the audio cables must still be connected.

TV and Cable Box



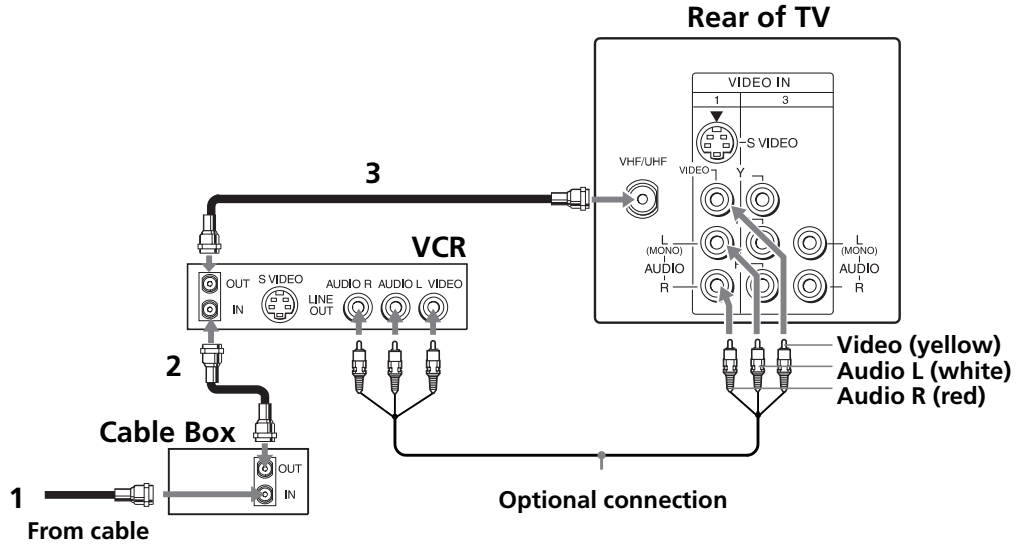
1 Connect the coaxial cable from your cable service to the IN jack on your cable box.

2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF/UHF jack on the TV.

✍ To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box) and use the cable box's remote control to change channels.

✍ If you will be controlling all channel selection through your cable box, you should consider using the Channel Fix feature by setting your TV to channnel 3 or 4 (see page 20).

TV, VCR, and Cable Box



1 Connect the coaxial cable from your cable service to the IN jack on your cable box.

2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the IN jack on your VCR.

3 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF jack on the TV.

✍ If you will be controlling all channel selection through your cable box, you should consider using the Channel Fix feature by setting your TV to channel 3 or 4 (see page 20).

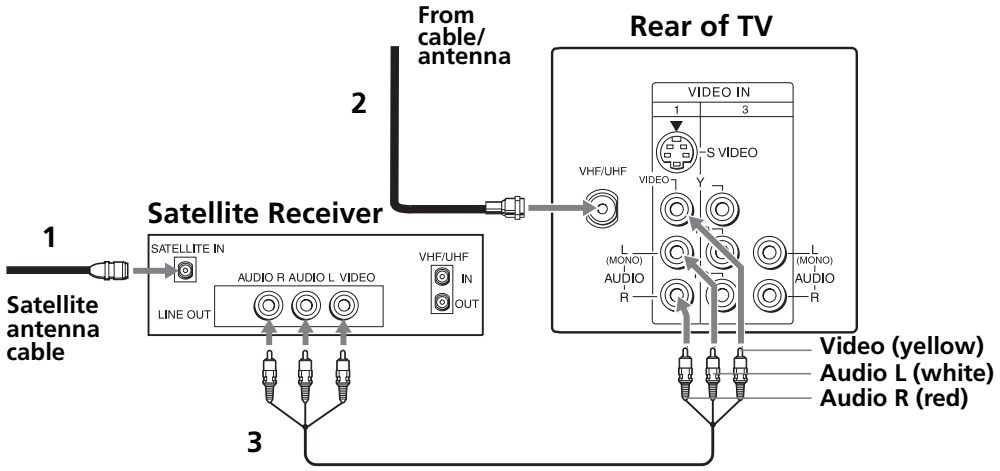
Optional connection

If your VCR is equipped with video outputs, you can get better picture quality by connecting Audio/Video cables (not supplied) from AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV.

✍ You can use the TV/VIDEO button to switch between the VHF/UHF and VIDEO inputs.

✍ For better picture quality, use S VIDEO instead of the yellow Audio/ Video cable. S VIDEO does not provide sound; the audio cables must still be connected.

TV and Satellite Receiver



1 Connect the cable from your satellite antenna to SATELLITE IN on your satellite receiver.

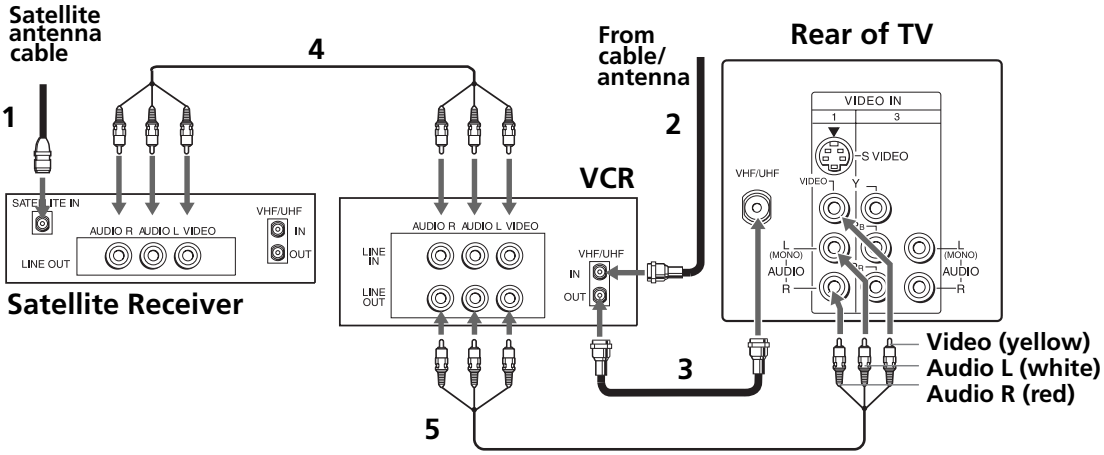
2 Connect the coaxial cable from your cable service or antenna to the VHF/UHF jack on your TV.

3 Using Audio/Video cables (not supplied), connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your TV.

✍ You can use the TV/VIDEO button to switch between the VHF/UHF and VIDEO inputs.

✍ For better picture quality, use S VIDEO instead of the yellow Audio/ Video cable. S VIDEO does not provide sound; the audio cables must still be connected.

TV, Satellite Receiver, and VCR



1 Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.

2 Connect the coaxial cable from your cable service or antenna to the IN jack on your VCR.

3 Using a coaxial cable (not supplied), connect the OUT jack on your VCR to the VHF/UHF jack on your TV.

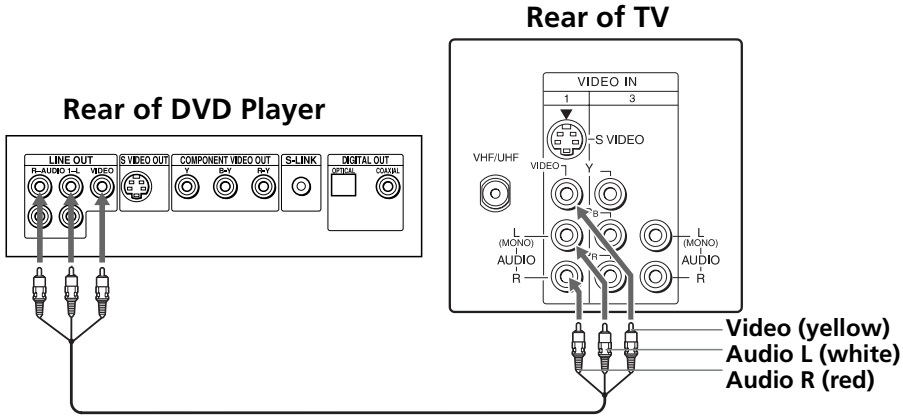
4 Using Audio/Video cables (not supplied), connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your VCR.

5 Using Audio/Video cables (not supplied), connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.

✍ To view from the satellite receiver or VCR, select the video input to which your satellite receiver or VCR is connected by pressing TV/VIDEO on the remote control.

Connecting a DVD Player

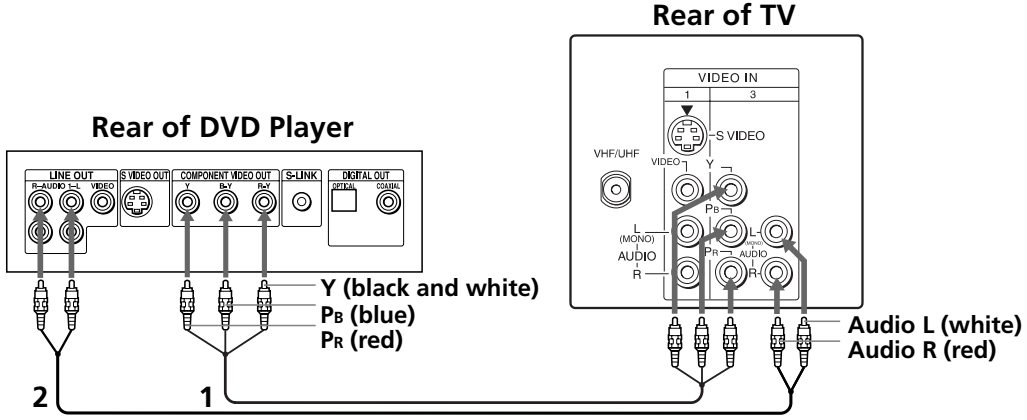
Using Audio/Video cables (not supplied), connect AUDIO and VIDEO OUT on your DVD player to AUDIO and VIDEO IN on your TV.



✍ For better picture quality, use S VIDEO instead of the yellow Audio/ Video cable. S VIDEO does not provide sound; the audio cables must still be connected.

Optional connection

If your DVD player is equipped with component video outputs (Y, P_B, P_R), you can optimize the picture quality by using component video cables.



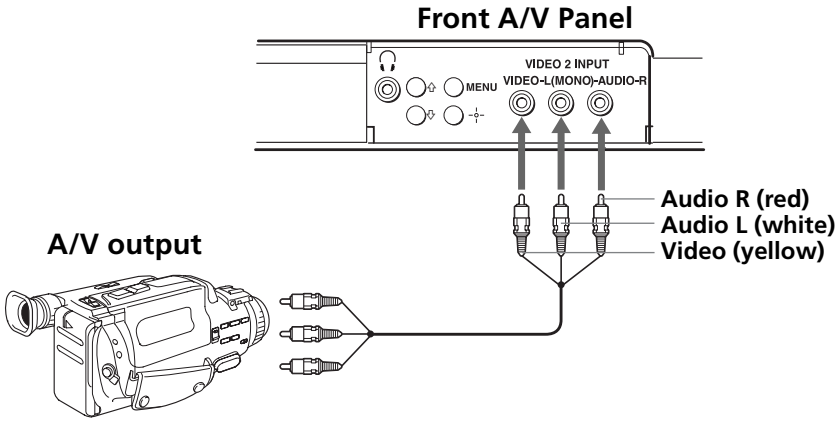
1 Using component video cables (not supplied), connect the Y, P_B, P_R OUT on your DVD player to Y, P_B, P_R IN on your TV.

2 Connect AUDIO OUT on your DVD player to AUDIO IN on your TV.

✍ The Y, P_B, P_R outputs on your DVD player are sometimes labeled Y, C_B, and C_R or Y, B-Y, and R-Y. If so, connect the cables to like colors.

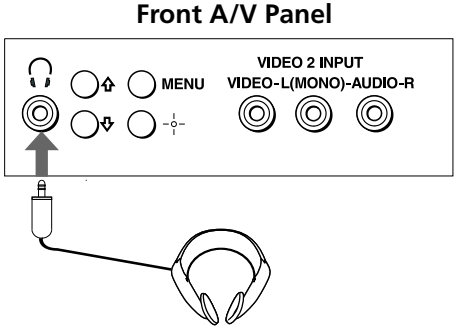
Connecting a Camcorder

Using Audio/Video cables (not supplied), connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.



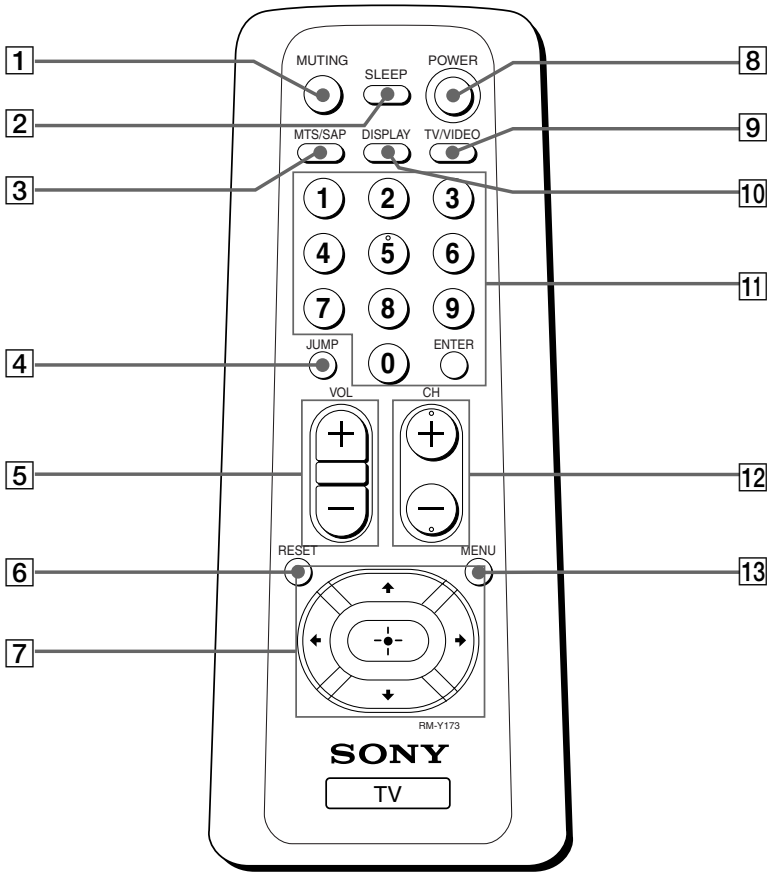
Connecting Headphones

Connect the headphones to the jack on the front of your TV. Headphone jack is STEREO.

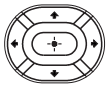


Using the Remote Control and Basic Functions

This section shows you how to use the buttons on the remote control and how to navigate the on-screen menus.



Using the Remote Control

Button	Description
1 **MUTING**	Instantly turns off the sound. Press again or press VOL + to restore the sound.
2 **SLEEP**	Turns the TV off automatically in approximately 15, 30, 45, 60, or 90 minutes. Cancel by pressing until SLEEP OFF appears.
3 **MTS/SAP**	Cycles through the Multi-channel TV Sound (MTS) options: Stereo, Mono, and Auto SAP (Second Audio Program).
4 **JUMP**	Press to jump back and forth between two channels. The TV alternates between current channel and the last channel that was selected.
5 **VOL (volume)**	Press when you want to adjust the volume.
6 **RESET**	Press to return to factory settings while in an on-screen menu.
7 	Moves the cursor in the on-screen menus. Press the arrow buttons to move the cursor, then press the center button to select or access an option.
8 **POWER**	Press when you want to turn the TV on or off.
9 **TV/VIDEO**	Cycles through available video inputs.
10 **DISPLAY**	Press to display the current time (if set) and channel number. Press again to turn DISPLAY off.
11 **0-9 and ENTER**	Change the channels directly. Press 0-9 buttons to select a channel, then press ENTER.
12 **CH (channel)**	Press when you want to change channels.
13 **MENU**	Displays the on-screen menu. Press again to exit the menu at any time.

✍ If you lose your remote control, see page 32.

Setting Up the TV Automatically

After you have finished connecting your TV, you can perform Auto Program to set up your channels.

1 Press POWER to turn on the TV. The Initial Setup screen appears.

2 Press CH + on the remote control or on the TV front panel to perform Auto Program, or press CH – to exit.

✍ The Initial Setup screen appears each time you turn on the TV until you perform Auto Program.

To perform Auto Program again

1 Press MENU.

2 Press → to highlight Channel Setup ( ).

3 Press ↓ to highlight Cable. Press ⊕ to select.

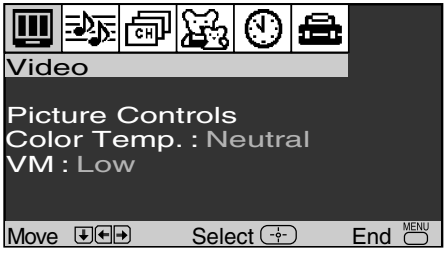
4 Press ↑ or ↓ to select On or Off according to how you connected your TV. Press ⊕.

5 Press ↓ to highlight Auto Program. Press ⊕ to search for channels.

✍ After performing Auto Program, press MENU to exit.

Quick Start to the Menus

The following settings are available in your on-screen menus:

Menu	Allows you to
	Make adjustments to your picture settings.
	Change your audio settings.
	Customize your channel settings.
	Set rating limits on your TV based on a program's rating or content.

✍ The menus shown in this manual are for KV-24FS100. Your menus may not look like those illustrated.

Menu	Allows you to
	Set the clock on your TV and program scheduled viewing using Timer 1 and Timer 2.
	Select closed captioning options, label video inputs, adjust tilt correction, select menu languages, or run a demo of the menus.

Using the Menus

This section shows the options available for setting up and adjusting your TV.

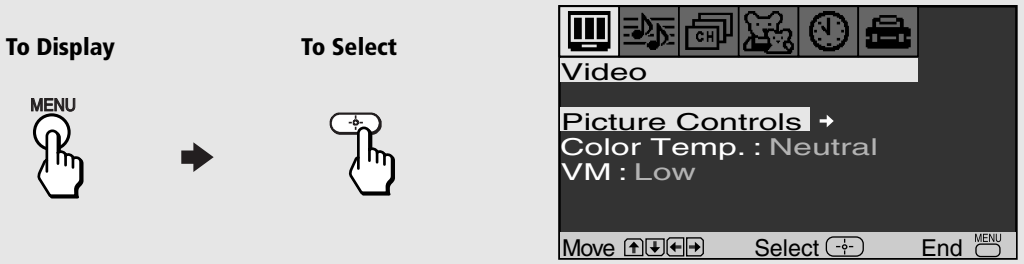
To Access a Menu

1. Press MENU to display the on-screen menu.
2. Use the ⇦ or ⇨ buttons to highlight the desired menu, then press ⊕.
3. Use the ⇧ or ⇩ buttons to highlight the desired option, then press ⊕.
4. Press ⊕ to complete the adjustment or follow the instructions that will appear on your screen to activate the desired option.
5. Press MENU to exit the menu.

✍ Press MENU once to display the on-screen menu, and press again to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 90 seconds.

Using the Video Menu

To access the Video menu, refer to the following steps:



Picture Controls	Press ⇨ to open Picture Controls menu: **Picture:** Press ⇦ to decrease the contrast. Press ⇨ to increase contrast. **Brightness:** Press ⇦ to darken the picture. Press ⇨ to brighten the picture. **Color:** Press ⇦ to decrease color saturation. Press ⇨ to increase color saturation. **Hue:** Press ⇦ to increase the red tones. Press ⇨ to increase the green tones. **Sharpness:** Press ⇦ to soften the picture. Press ⇨ to sharpen the picture.
Color Temp. *White color tint adjustment*	Use the ⇧ or ⇩ buttons to select from one of the following options: **Cool:** Gives the white colors a blue tint. **Neutral:** Gives the white colors a neutral tint. **Warm:** Gives the white colors a red tint.
VM *Velocity Modulation*	**KV-20FS100 and KV-24FS100 only** Sharpens picture definition to give objects a sharp, clean edge. Use the ⇧ or ⇩ buttons to select from one of the following options: **Off**, **High**, **Low**.

Using the Audio Menu

To access the Audio menu, refer to the following steps:

MTS
Multi-Channel TV Sound

Press ⇧ or ⇩ to select one of the following options:
Stereo: Select when viewing a broadcast in stereo.
Mono: Select to reduce noise in areas of poor reception.
Auto SAP: Select to have the TV automatically switch to a Second Audio Program (SAP) when a signal is received.

✍ Press MTS/SAP to access MTS settings (Stereo, Mono, Auto SAP) directly.

✍ If your TV is set to Auto SAP, some programs may be muted or distorted. If your TV does not output sound, change your Audio setting to Stereo or Mono.

Using the Channel Setup Menu

To access the Channel Setup menu, refer to the following steps:

Favorite Channels
Quick access to favorite channels

Press ⇨ to open the Favorite Channels menu:

1. Use the ⇧ or ⇩ buttons to select the position (1-5) where you want to set a favorite channel, then press ⊕.
2. Using the ⇧ or ⇩ button, select the desired channel.
3. Press ⊕ to change to the channel selected.
4. Press ⇦ to return to the Channel Setup menu or press MENU to exit.

✍ To use Favorite Channels: Exit all menus and press ⊕. Press ⇧ or ⇩ to move the cursor to the desired channel number and press ⊕.

Cable

On: Select if you are receiving cable channels with a CATV cable.
Off: Select if you are using a TV antenna.

✍ After changing your cable settings, you will need to perform Auto Program. When Channel Fix is set, you will not be able to use your Cable settings.

Channel Fix

2-6: Select when you want to control all channel selection through a cable box or VCR. Select the appropriate channel (usually 3 or 4) and use the cable box's or VCR's remote control for channel selection.
Video 1: Select from available video inputs when you have connected video equipment (e.g. satellite receiver) and you want your TV fixed to it.
Off: Channel Fix is not set.

Auto Program

Press ⇨ to perform Auto Program.
The TV will scan through all available channels and program receivable channels.

Channel Skip/Add

Use this feature after you run Auto Program to skip unwanted channels or add new ones. Press ⇨ to open the Channel Skip/Add menu:

1. Use the ⇧ or ⇩ buttons to select the position of the desired channel, then press ⊕.
2. Use the ⇧ or ⇩ buttons to select Skip or Add, then press ⊕.
3. Press ⇦ to return to the Channel Setup menu or press MENU to exit.

✍ Pressing CH+ or CH- will skip over channels that have been skipped. You can still use the ⓪-⑨ buttons to directly tune to skipped channels.

Channel Label

Label up to 40 channels with their call letters

Press ⇨ to open the Channel Label menu:

1. Press ⊕, then press ⇧ or ⇩ until you reach the desired channel number. Press ⊕ to activate the channel.
2. Press ⊕, then use the ⇧ or ⇩ button to display the first call letter or number of the caption, then press ⊕ to select it. When finished, press ⊕ to activate.

✍ Favorite Channels, Cable, Channel Skip/Add, and Channel Label cannot be used when Channel Fix is set.

Parental Control

The Parental Control feature is designed to help parents monitor what their children watch on television. This section shows you the different rating systems available and how to set your TV's rating limit.

Overview of the Ratings

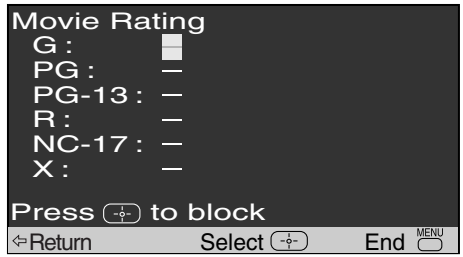
Once you have become familiar with these rating systems, you should be ready to set your TV's rating limit.

Movie Rating

(U.S. models only)

This system defines the rating levels of movies shown in theaters and on prime cable channels.

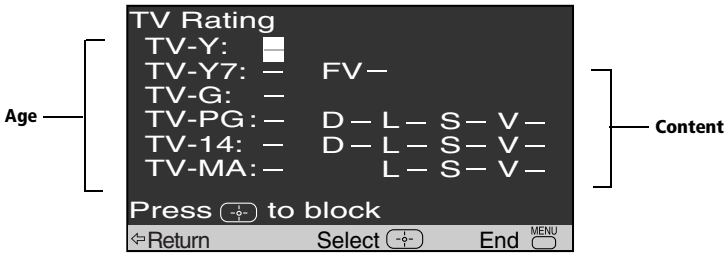
Rating	Defined as
G	General audience
PG	Parental Guidance suggested
PG-13	Parents strongly cautioned
R	Restricted
NC-17	No one 17 and under admitted
X	Adult audience only



TV Rating

(U.S. models only)

The TV rating is divided into two groups: age-based and content-based.



Age	Defined as
TV-Y	All children
TV-Y7	Directed to older children
TV-G	General audience
TV-PG	Parental Guidance suggested
TV-14	Parents strongly cautioned
TV-MA	Mature Audience only

Content	Defined as
FV	Fantasy Violence
D	Suggestive dialogue
L	Strong language
S	Sexual situations
V	Violence

✍ The content ratings will increase depending on the level of the age-based rating. For example, a program with a TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain intense violence.

Unrated

(U.S. models only)

You have the option of blocking TV programs or movies that are not rated.

Allow	Allows all unrated programs
Block	Blocks all unrated programs

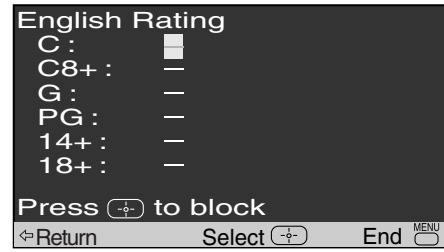
✍ If you choose to block unrated TV programs, please be aware that the following programs may be blocked: emergency broadcasts, political programs, sports, news, public service announcements, religious programs, and weather.

English Rating

(Canadian models only)

These ratings are for Canadian programs that are broadcast in English.

Rating	Defined as
C	Children
C8+	Children 8 years and older
G	General programming
PG	Parental Guidance
14+	Viewers 14 and older
18+	Adult programming

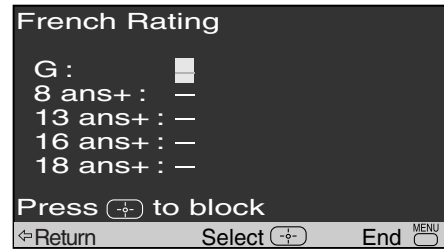


French Rating

(Canadian models only)

These ratings are for Canadian programs that are broadcast in French.

Rating	Defined as
G	General
8 ans+ :	Not recommended for younger children
13 ans+ :	Not recommended for children under age 13
16 ans+ :	Not recommended for ages under 16
18 ans+ :	This program is restricted to adults



U.S.A. Rating

(Canadian models only)

For programs from the United States, please see “TV Rating” on page 23.

Using the Parental Control Menu

To access the Parental Control menu, refer to the following steps:

In the Parental Control menu, you will be asked to set a 4-digit password for any further access into Parental Control.

1 Press ⊕, then use the ⓪-⑨ buttons to enter a 4-digit password.

✍ Keep this manual in a safe place. If you forget your password, see page 32.

2 Confirm your password by entering it again.

Once your password is set correctly, the next Parental Control menu appears. For future access to this menu, use your password. A password is needed every time you want to access Parental Control menu.

Setting the Rating

You can change the Rating by selecting one of the Lock options.

1 With Lock highlighted, press ⊕.

If you are not familiar with the Parental Guidelines rating system, use one of the following preselected categories to simplify the rating selections: Child, Youth, Young Adult.

2 Use the ⇧ or ⇩ buttons to select the desired rating, then press ⊕.

Rating	TV will allow a maximum rating of
Child	TV-Y, TV-G, G (U.S. models only), G (Canadian models only)
Youth	TV-PG, PG (U.S. models only), PG (Canadian models only)
Young Adult	TV-14, PG-13 (U.S. models only), 14+ (Canadian models only)
Custom	Select to set more restrictive ratings (see next section)
Off	No rating limit

Changing your Password

1 Use the ⇧ or ⇩ button to move the cursor to Change Password and press ⊕.

2 Follow steps 1 and 2 for "Using the Parental Control Menu" on page 25.

Information for Parents

To view a program that exceeds the TV rating

❑ Press ENTER, then use the 0-9 buttons to enter your password.

✍ Entering your password to view a blocked program will temporarily turn Lock to Off. To reactivate your Lock settings, turn the TV off. When you turn the TV on, your Lock settings are restored.

Using the Custom Menu

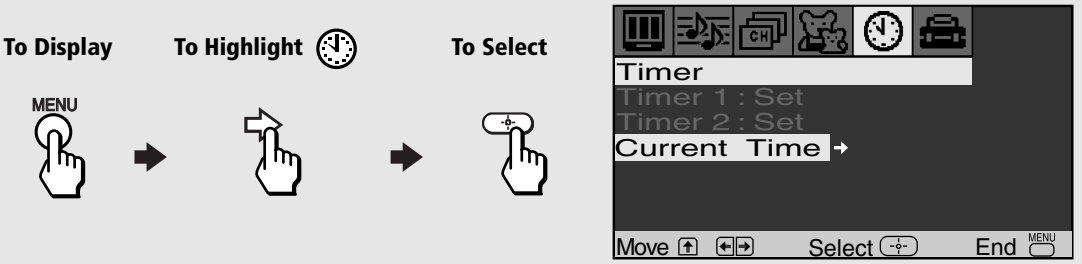
Before setting Custom ratings, see pages 22-24, “Overview of the Ratings,” for a description of the available rating systems.

Follow the instructions on the screen to make your custom settings. Select the country desired for your TV’s rating limit. See page 23 for U.S. models and page 24 for Canadian models for more information.

✍ Once you have blocked a rating or content, all higher ratings or content will be automatically blocked.

Using the Timer Menu

To access the Timer menu, refer to the following steps:



Current Time Set your TV to the current day and time.

Press ⇨ to open Current Time menu:

1 Use the ⇧ or ⇩ button to enter the day and time, then press ⊕.

2 Press MENU to exit the menu.

✍ You must set the Current Time before you can use Timer 1 and Timer 2.

Timer 1 and Timer 2
Scheduled viewing

Use your timers settings to program your TV by day, time, duration and channel. The timer's duration is maximum of 6 hours. When the channel is fixed, it is not necessary to set the channel.

With the menu open, set cursor on Timer 1 or Timer 2:

1 Press ⇧ or ⇩ to select Timer 1 or Timer 2, then press ⊕.

2 Press ⇧ or ⇩ to enter the desired day, time, duration and channel, then press ⊕. The Timer status should be On when the Timer has been set.

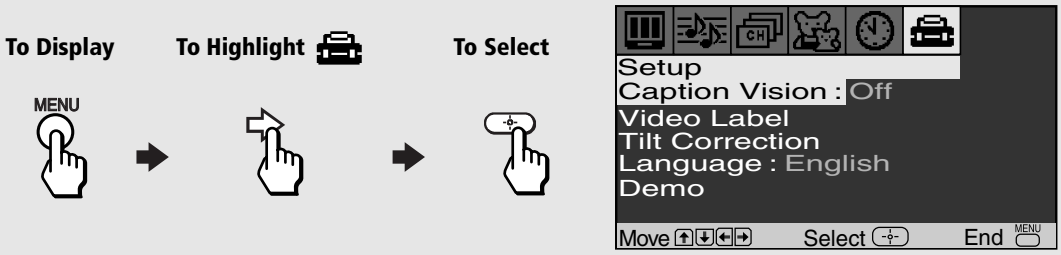
3 Press MENU to exit the menu.

✍ You can set the Timer to On, Off, or Set. Once the timer is set, you can turn it On or Off without having to go through the settings. When you set Timer 1 or Timer 2, a red light on the front panel of your TV will turn on.

✍ When you perform Auto Program, Timer 1 and Timer 2 settings will be cleared. Also, in the event of any loss of power, Current Time and Timer 1 and Timer 2 settings will be cleared.

Using the Setup Menu

To access the Setup menu, refer to the following steps:



Caption Vision *Closed-Captioning*	Allows you to select from three closed caption modes (for programs that are broadcast with closed caption). Press ⇧ or ⇩ to select one of the following options: **CC1, 2, 3, 4:** Displays printed dialogue and sound effects of a program. **Text1, 2, 3, 4:** Displays network/station information. **XDS** (Extended Data Services): Displays the name of the current program and its remaining time, if available. **Off:** Caption Vision is not activated.
Video Label *Label connected equipment*	Allows you to label the audio/video components you connected to the TV: VCR, DVD, etc. When you press TV/VIDEO to switch inputs, the Video Label will display on-screen. Press ⇨ to open the Video Label menu: **1** Press ⇧ or ⇩ to access the input you want to label and press ⊕. **2** Press ⇧ or ⇩ to choose a label and press ⊕.
Tilt Correction	Press ⇨ to open Tilt Correction: Press ⇧ or ⇩ to correct any tilt of the picture from –5 to +5, then press ⊕ to activate and return to the Setup menu.
Language	Display all menus in the language of your choice. Use the ⇧ or ⇩ buttons to select desired language and press ⊕.
Demo	Press ⊕ to run a demonstration of the on-screen menus.

✍ You can press any key to exit the Demo mode.

Other Information

Troubleshooting

If you are having a problem with your TV, try the suggestions below. If the problem persists, contact your nearest Sony Dealer.

No picture, no sound	❑ Make sure the power cord is plugged in. ❑ If a red light is flashing on the front of your TV for more than a few minutes, disconnect and reconnect the power cord to restore the TV. If the problem continues, call your local service center. ❑ Check the TV/VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 13). ❑ Make sure the batteries have been inserted correctly into the remote control (page 2). ❑ Try another channel; it could be station trouble.
Poor or no picture, good sound	❑ Adjust Picture in the Picture Controls menu under Video (page 18). ❑ Adjust Brightness in the Picture Controls menu under Video (page 18). ❑ Check the antenna and/or cable connections (page 4).
Good picture, no sound	❑ Press MUTING so that MUTING disappears from the screen (page 13). ❑ Check your Audio settings. Your TV may be set to Auto SAP (page 19).
No color	❑ Adjust Color in the Picture Controls menu under Video (page 18).
Only snow appears on the screen	❑ Check the Cable setting in the Channel Setup menu (page 20). ❑ Check the antenna and/or cable connections (page 4). ❑ Make sure the channel selected is currently broadcasting.
Dotted lines or stripes	❑ Adjust the antenna. ❑ Move the TV away from other electronic equipment. Some electronic equipment can create electrical noise, which can interfere with TV reception.
Double images or ghosts	❑ Check your outdoor antenna or call your cable service.

Cannot receive higher number channels (UHF) when using an antenna	❑ Make sure Cable is set to Off in the Channel Setup menu (page 20). ❑ Perform Auto Program to add channels that are not presently in the memory (page 14).
Cable stations don't seem to work	❑ Make sure Cable is set to On in the Channel Setup menu (page 20). ❑ Perform Auto Program to add channels that are not presently in the memory (page 14).
Remote control does not operate	❑ Batteries could be weak. Replace them (page 2). ❑ Move the TV 3-4 or more feet away from fluorescent lights.
The TV needs to be cleaned	❑ Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.
Lost password for Parental Control	❑ In the password screen, enter the following master password: 4357. After using the master password, you must create a new password, it cannot be used to unlock currently blocked channels.
You lost your remote control	❑ You can use the front Audio/Video panel controls to access the menu (page 2). Contact your nearest Sony Dealer to order a replacement.

If, after reading these Operating Instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

Specifications

For all models (except as noted)

Television system	American TV standard/NTSC
Channel coverage	VHF: 2-13/UHF: 14-69/CATV: 1-125
Antenna	75-ohm external antenna terminal for VHF/UHF
Picture tube	FD Trinitron® tube
Power requirements	120V, 60 Hz
Supplied Accessories	Size AA (R6) batteries (2) Remote Control RM-Y173 (1)
Optional Accessories	Connecting cables VMC-810S/820S, VMC-720M, YC-YC-15V/30V, RK74A EAC-66 U/V mixer
KV-13FS100, KV-13FS110	
Screen size	Visible screen size: 13 inches (330 mm) measured diagonally Actual screen size: 14 inches (355.6 mm) measured diagonally
Inputs/outputs	2 video, 2 audio 1 Y, P_B, P_R, 1 audio 1 headphone jack
Speaker output	3 W x 2
Power Consumption	100 W in use 1 W in standby
Dimensions (W/H/D)	407 x 340 x 411 mm (16x $13\frac{3}{8}$ x $16\frac{1}{8}$ in.)
Mass	12 kg (26 lbs. 7 oz.)
KV-20FS100	
Screen size	Visible screen size: 20 inches (508 mm) measured diagonally Actual screen size: 21 inches (533.4 mm) measured diagonally
Inputs/outputs	2 video, 2 audio 1 Y, P_B, P_R, 1 audio 1 headphone jack
Speaker output	5 W x 2
Power Consumption	120 W in use 1 W in standby
Dimensions (W/H/D)	592 x 466 x 494 mm ($23\frac{1}{4}$ x $18\frac{3}{8}$ x $19\frac{1}{2}$ in.)
Mass	24.8 kg (54 lbs. 10 oz.)

KV-24FS100	
Screen size	Visible screen size: 24 inches (610 mm) measured diagonally Actual screen size: 25 inches (635 mm) measured diagonally
Inputs/outputs	2 video, 2 audio 1 S VIDEO 1 Y, P_B, P_R, 1 audio 1 headphone jack
Speaker output	7.5 W x 2
Power Consumption	145 W in use 1 W in standby
Dimensions (W/H/D)	704 x 524 x 472 mm ($27\frac{3}{4}$ x $20\frac{5}{8}$ x $18\frac{1}{2}$ in.)
Mass	35 kg (77 lbs. 1oz.)

Design and specifications are subject to change without notice.

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Sony Corporation Printed in U.S.A.

SONY

4-086-342-**42**

FD Trinitron

WEGA®

Manual de Instrucciones

KV-21FS100
KV-25FS100

Lea este manual antes de operar el producto.

© 2002 por Corporación Sony

ADVERTENCIA

Para disminuir el riesgo de incendio o descarga eléctrica, no exponga el televisor a lluvia o humedad.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION
RISQUE DE CHOC ELECTRIQUE,
NE PAS OUVRIR
PRECAUCION
RIESGO DE CHOQUE ELECTRICO
NO ABRIR
PRECAUCION: PARA REDUCIR EL RIESGO DE DESCARGA ELECTRICA NO RETIRE LA CUBIERTA NI LA PARTE POSTERIOR DE ESTE APARATO.
NO CONTIENE PIEZAS QUE EL USUARIO PUEDA REPARAR. PARA SERVICIO ACUDA A PERSONAL ESPECIALIZADO.

Este símbolo tiene por objeto advertir al usuario de la presencia de "voltaje peligroso" desprovisto de aislamiento en el interior del producto que puede ser de suficiente magnitud como para presentar un riesgo de descarga eléctrica para las personas.

Este símbolo tiene por objeto advertir al usuario de la presencia de instrucciones importantes de uso y mantenimiento (servicio) en la documentación que acompaña a este aparato.

Nota para el instalador de CATV

Esta nota pretende llamar la atención del instalador del sistema CATV en relación con el artículo 820-40 de la NEC que proporciona las pautas para una adecuada conexión a tierra y, en particular, especifica que el cable de conexión a tierra debe estar conectado al sistema de toma de tierra del edificio lo más cerca posible de la entrada del cable.

PRECAUCIONES DE SEGURIDAD

- ❏ Utilice el televisor con ca (corriente alterna) como se indica a continuación:
  ca 120 V 60 Hz
  ca 220 V 50/60 Hz (Chile, Perú, Bolivia)
  ca 120 - 220 V 50/60 Hz (Argentina)
- ❏ Una terminal del enchufe es más ancha que la otra para garantizar la seguridad y solo se podrá introducir en la toma de corriente de una manera (sólo los modelos con ca 120 V). Si no puede insertar completamente el enchufe en la toma, póngase en contacto con su proveedor.
- ❏ Si se introduce algún objeto sólido o líquido en el televisor, desconéctelo y haga que sea revisado por personal especializado antes de volver a utilizarlo.

PRECAUCIÓN

Si utiliza juegos de televisión, ordenadores y productos similares con el televisor, mantenga las funciones de brillo y contraste a una configuración baja. Si una imagen fija (sin movimiento) permanece en pantalla durante un tiempo prolongado con una configuración alta del brillo y el contraste, dicha imagen podría permanecer indefinidamente en la pantalla. Si mira continuamente el mismo canal, los logotipos del mismo podrían quedar impresos en la pantalla del televisor. La garantía no cubre este tipo de marcas porque son el resultado de un uso inadecuado.

Para reducir el riesgo de descarga eléctrica, no utilice el enchufe polarizado con un cable de extensión, un receptáculo ni otras tomas, a menos que las terminales estén bien insertadas y no queden expuestas.

✍ Se advierte que cualquier cambio o modificación que no se apruebe de modo explícito en este manual podría anular su autorización para utilizar este equipo.

NOTIFICACIÓN

Este equipo se ha probado y cumple con las restricciones de los aparatos digitales de clase B de acuerdo con la sección 15 del reglamento de FCC. Estas restricciones se han diseñado para proporcionar protección contra interferencias nocivas en instalaciones domésticas. Este equipo genera, utiliza y puede irradiar energía de radio frecuencia y si no se instala y utiliza siguiendo las instrucciones, puede provocar interferencias en las radiocomunicaciones. Sin embargo, no se garantiza que no se produzcan interferencias en una instalación determinada. Si el equipo produce interferencias en la recepción de radio y televisión que se pueden determinar conectando y desconectado el equipo, el usuario debería intentar corregir la interferencia siguiendo una o varias de las siguientes medidas:

- ❏ Reorientar o cambiar de lugar las antenas receptoras.
- ❏ Aumentar la separación entre el equipo y el receptor.
- ❏ Conectar el equipo a una toma o a un circuito distinto al que está conectado el receptor.
- ❏ Ponerse en contacto con el proveedor o con un técnico con experiencia en radio y televisión para obtener asistencia.

Protección del televisor

- ❏ Para evitar el sobrecalentamiento interno, no obstruya los orificios de ventilación.
- ❏ No instale el televisor en un lugar con temperatura elevada, humedad, exceso de polvo o donde puedan producirse vibraciones.

Nota sobre Caption Vision

Este receptor de televisión proporciona pantalla de televisión con visualización de subtítulos de acuerdo con el punto § 15.119 del reglamento de la FCC.
El uso del televisor con finalidades distintas a la visualización privada de emisiones de programas en UHF o VHF o transmisiones vía cable dirigidas al público en general puede requerir la autorización de la compañía de emisión por cable y/o del propietario del programa.

Información para el propietario

Los números de serie y modelo están situados en la portada de este manual y en la parte posterior del televisor.

Marcas comerciales y derechos de autor

ENERGY STAR® es una marca registrada.

En calidad de compañía asociada a ENERGY STAR®, Sony ha determinado que este producto o modelo de producto cumple con las directrices de uso eficiente de energía de ENERGY STAR®.

Normas importantes sobre seguridad

Para su protección lea completamente las instrucciones y conserve este manual para consultarlo en el futuro. Tenga en cuenta y siga todas las advertencias, precauciones e instrucciones que aparecen en pantalla o que se describen en el manual de instrucciones o de asistencia técnica.

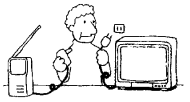
ADVERTENCIA

Para prevenir daños personales, se aconseja seguir las siguientes precauciones básicas de seguridad durante la instalación, el uso y la reparación del aparato.

Uso

Fuentes de alimentación

Este aparato sólo debe utilizarse con la fuente de alimentación que se indica en la placa del número de serie/modelo. Si no esta seguro del tipo de alimentación eléctrica que se utiliza en su domicilio, consulte con su proveedor o con la compañía eléctrica local. Para los aparatos alimentados mediante una batería, consulte el manual de instrucciones.

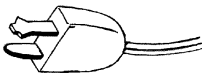


Conexión a tierra o polarización

Este aparato está equipado con un enchufe de cable de alimentación de ca polarizado (con una terminal más ancha que la otra) o con un enchufe de tres cables de conexión a tierra (con una tercera terminal para la conexión a tierra).
Consulte las siguientes intrucciones .

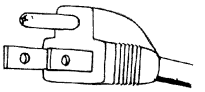
Para los equipos con un enchufe de cable de alimentación de ca polarizado

El enchufe se introduce en la toma de corriente en una única dirección. Se trata de una característica de seguridad. Si no puede insertar completamente el enchufe en la toma, intente girar el enchufe. Si sigue teniendo problemas para insertar el enchufe, póngase en contacto con su electricista para que le instale una toma adecuada. No ponga a prueba la finalidad de seguridad del enchufe polarizado forzándolo.

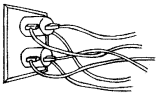


Advertencia alternativa
Para los equipos con un enchufe de ca con tres cables de conexión de tierra

Este enchufe únicamente se acoplará a una toma de corriente de conexión a tierra. Se trata de una característica de seguridad. Si no puede insertar el enchufe en la toma, póngase en contacto con su electricista para que le instale una toma adecuada. No ponga a prueba la seguridad del enchufe de conexión a tierra.



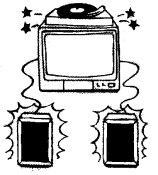
Sobrecarga
No sobrecargue las tomas de pared, los cables de extensión ni los receptáculos más allá de su capacidad, puesto que podría producirse un incendio o una descarga eléctrica. Apague siempre el televisor cuando no lo utilice. Si no va a utilizar el aparato durante un tiempo prolongado, desconéctelo de la toma de pared como precaución ante la posibilidad de que se produzca un mal funcionamiento interno que pueda provocar un incendio.



No desconecte la antena ni el cable de alimentación en caso de tormenta. Los relámpagos podrían descargar mientras sujeta el cable y provocarle lesiones graves. Apague el televisor y espere que el tiempo mejore.

Introducción de objetos y líquidos
No introduzca nunca objetos extraños en el aparato a través de las ranuras de la unidad, puesto que podrían entrar en contacto con puntos de voltaje peligrosos o provocar cortocircuitos de piezas y originar un incendio o descarga eléctrica. Nunca vierta líquidos de ningún tipo en el aparato.

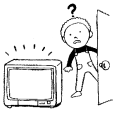
Accesorios
No utilice accesorios no recomendados por el fabricante ya que podrían ser peligrosos.



No coloque ningún tipo de objetos, especialmente objetos pesados, encima del aparato. Podrían caerse del aparato y causar lesiones.

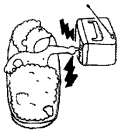
Limpieza
Desconecte el aparato de la toma de pared antes de limpiarlo. No utilice detergentes líquidos ni aerosoles. Utilice un paño ligeramente humedecido con agua para limpiar el exterior del aparato.

Si se produce un ruido continuo o intermitente en el interior del aparato de televisión mientras está en funcionamiento, desconecte el televisor y póngase en contacto con el proveedor o con el servicio de asistencia técnica. Es normal que algunos aparatos de televisión produzcan ocasionalmente este tipo de ruidos, especialmente cuando se conectan y desconectan.



Instalación
Para levantar o mover el aparato siempre se deberá hacer entre dos o más personas. El aparato es pesado y la superficie inferior es plana. Si intenta mover el aparato sin ayuda o lo manipula de forma insegura, puede producirse lesiones graves. Instale el aparato sobre una superficie plana y estable.

Agua y humedad
No utilice aparatos de conexión eléctrica cerca de agua, por ejemplo: cerca de la bañera, el lavabo, el fregadero, el lavadero, en un sótano con humedad o cerca de una piscina, etc.



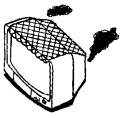
Colocación
No sitúe el aparato sobre un carro, una mesa pequeña, un tripie, un soporte, una mesa o una estantería inestables. El aparato podría caer y dañarse o bien provocar lesiones graves a niños o adultos. Utilice únicamente carros o mesas recomendados por el fabricante para el modelo especifico de televisor. Para el montaje del producto deberán seguirse las instrucciones del fabricante y utilizar los accesorios de montaje recomendados por el mismo. Si se desea mover un aparato colocado encima de un carro, deberá hacerse con cuidado. Las paradas bruscas, la fuerza excesiva y las superficies inestables pueden causar que el aparato y el carro volqueen.

Desconecte todos los cables del aparato antes de intentar moverlo.

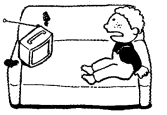
No permita que niños o animales se suban encima del aparato o lo empujen. El aparato podría caerse y causar lesiones graves.

Ventilación
Las ranuras y aperturas en la unidad y en la parte posterior o inferior son para obtener la ventilación necesaria. Para garantizar el buen funcionamiento del aparato y protegerlo de un sobrecalentamiento, estas ranuras y aperturas nunca se deberán obstruir ni cubrir.

- No cubra nunca las ranuras y aperturas con un paño ni otros tejidos.



- No bloquee nunca las ranuras y aperturas situando el aparato encima de una cama, un sofá, una alfombra o superficies similares.



- No sitúe nunca el aparato en un espacio cerrado, como una biblioteca o un armario empotrado, a menos que exista la ventilación adecuada.

- No sitúe el aparato cerca o encima de un radiador o fuente de calor ni lo exponga a luz solar directa.

Protección del cable
No coloque ningún objeto encima del cable de alimentación ni alrededor del mismo, ni sitúe el aparato en un lugar donde el cable de alimentación pueda estar sometido a desgastes o usos no adecuados.

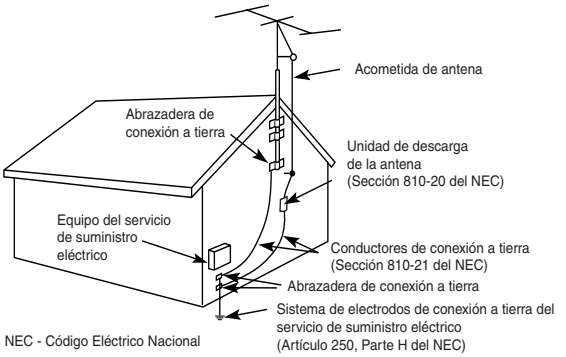
Conexión a tierra o polarización
Este aparato puede estar equipado con un enchufe de línea de corriente alterna polarizado (con una terminal más ancha que la otra). El enchufe sólo se puede introducir en la toma de corriente en una dirección. Se trata de una característica de seguridad. Si no puede insertar completamente el enchufe en la toma, intente girarlo. Si sigue teniendo problemas para introducir el enchufe, póngase en contacto con su electricista para que sustituya la toma obsoleta. No ponga a prueba la seguridad del enchufe polarizado.

Antenas
Conexión a tierra de una antena exterior
Para instalar una antena exterior, siga los procedimientos que se indican a continuación. Los sistemas de antenas exteriores no deben situarse cerca de líneas eléctricas o circuitos de alimentación o luz eléctrica, o bien donde pueda entrar en contacto con dichas líneas eléctricas o circuitos.

CUANDO INSTALE UN SISTEMA DE ANTENA EXTERIOR, EXTREME LAS PRECAUCIONES Y MANTÉNGALO ALEJADO DE DICHAS LINEAS ELECTRICAS O CIRCUITOS, DADO QUE EL CONTACTO PUEDE RESULTAR FATAL.

Asegúrese de que el sistema de antena tiene conexión a tierra para proporcionar protección contra los incrementos de voltaje y el aumento de las cargas estáticas. El apartado 810 del Código Eléctrico Nacional (NEC) en EE.UU. y el apartado 54 del Código eléctrico de Canadá proporcionan información relativa a la conexión a tierra adecuada del mástil y de la estructura de soporte, la conexión a tierra del cable de conexión a la unidad de descarga de la antena, el tamaño de los conductores de la conexión a tierra, la ubicación de la unidad de descarga de la antena, la conexión de los electrodos de conexión a tierra y los requisitos de los electrodos de conexión a tierra.

Conexión a tierra de la antena de acuerdo con la NEC
Conexión a tierra de la antena de acuerdo con el Código Eléctrico Nacional, ANSI/NFPA 70.


Acometida de antena
Abrazadera de conexión a tierra
Unidad de descarga de la antena (Sección 810-20 del NEC)
Equipo del servicio de suministro eléctrico
Conductores de conexión a tierra (Sección 810-21 del NEC)
Abrazadera de conexión a tierra
Sistema de electrodos de conexión a tierra del servicio de suministro eléctrico (Artículo 250, Parte H del NEC)
NEC - Código Eléctrico Nacional

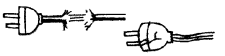
Rayos
Para mayor protección del receptor de televisión durante una tormenta con rayos o cuando no se utiliza durante largos periodos de tiempo, desconéctelo de la toma de pared y desconecte la antena. Con ello evitará que los rayos y los incrementos de voltaje dañen el receptor.

Reparación

Daños que requieren reparación

Desconecte el aparato de la toma de pared y haga que sea revisado por personal calificado cuando se produzcan las siguientes condiciones:

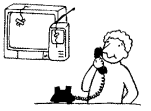
- **Si el cable de alimentación o el enchufe están dañados o deshilachados.**



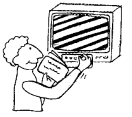
- **Si se ha vertido líquido en el interior del aparato o si se han caído objetos en el interior del producto.**

- **Si el aparato se ha expuesto a lluvia o agua.**

- **Si el aparato se ha caído y ha sufrido golpes excesivos o si se ha dañado la unidad.**



- **Si el aparato no funciona con normalidad al seguir las instrucciones del manual. Ajuste solamente los controles que se especifican en el manual de instrucciones. El ajuste inadecuado de otros controles puede provocar daños y a menudo requerirá mucho trabajo por parte de un técnico calificado para restablecer el funcionamiento normal del aparato.**



- **Si el aparato muestra un cambio de rendimiento significativo, debe repararse.**

Asistencia técnica

No intente reparar usted mismo el aparato, puesto que si abre la unidad puede exponerse a voltajes peligrosos u otros peligros. Ponga cualquier tipo de reparación en manos de personal de asistencia técnica calificado.

Piezas de reemplazo

Si necesita piezas de reemplazo, asegúrese de que el técnico certifique por escrito que ha utilizado piezas de reemplazo especificadas por el fabricante con las mismas características que las piezas originales. El uso de piezas no autorizadas puede provocar incendios, descargas eléctricas y otros peligros.

Comprobación de seguridad

Después de realizar cualquier reparación del aparato, solicite al técnico de la reparación que realice comprobaciones rutinarias de seguridad (como especifica el fabricante) para determinar si el aparato se encuentra en condiciones seguras de funcionamiento y certificarlo. Cuando el aparato llega al final de su vida útil, debe desecharse adecuadamente para evitar una implosión del tubo de la imagen. Consulte a un técnico de reparación calificado para depositar el aparato.

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Introducción

Gracias por la compra del televisor FD Trinitron WEGA® a color de Sony. Antes de utilizar este manual, verifique el número de modelo situado en la parte posterior del televisor o en la portada de este manual.

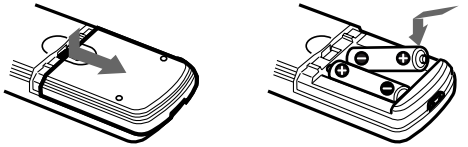
Características del televisor FD Trinitron WEGA®

Algunas de las características de las cuales disfrutará incluyen:

- ❏ **FD Trinitron CRT PLANO** — Nueva pantalla tecnológicamente avanzada para una calidad de imagen óptima.
- ❏ **Entradas Y, P_B, P_R** — Conexión de entrada de video para una calidad de imagen superior.
- ❏ **Bloqueo de canales** — Herramienta que permite a los padres bloquear los canales del televisor para controlar los programas que ven sus hijos.
- ❏ **Canales favoritos** — Acceso instantáneo a los canales favoritos con sólo oprimir un botón.
- ❏ **Energy Star®** — Símbolo reconocido de eficacia energética.
- ❏ **S VIDEO** — Entrada de video que ofrece calidad de imagen mejorada.
- ❏ **MTS Directo** — Permite el acceso directo para cambiar el sonido multicanal del televisor: Estéreo, Mono, o Auto SAP (Segundo Programa de Audio) con sólo oprimir un botón.
- ❏ **Realce de graves**— Nueva característica que proporciona tonos graves más profundos y de mejor calidad.
- ❏ **Menús trilingües** — Elección de menús en inglés, francés o español (KV-21FS100 y KV-25FS100 con destino a Argentina, no tienen menús en francés).
- ❏ **Controles del panel frontal** — Permiten el acceso a los menús de pantalla sin utilizar el control remoto.
- ❏ **Entradas de A/V frontales** — Conexión rápida para videojuegos, cámaras de video, equipos estéreo/mono o audífonos.
- ❏ **Silenciamiento automático** — Función diseñada para silenciar automáticamente el televisor cuando no se reciben señales.

Baterias para el control remoto

Inserte dos baterias de tipo AA (R6) (incluídas) en el control remoto utilizando como ejemplo la siguiente ilustración.



✍ En condiciones de uso normales, las baterias tienen una duración máxima de seis meses. Si el control remoto no funciona correctamente, es posible que las baterias estén gastadas.

✍ Si no va a utilizar el control remoto durante un largo tiempo, extraiga las baterias para evitar posibles daños por fugas de las mismas.

Acerca de este manual

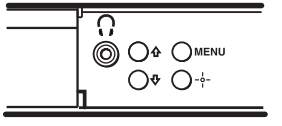
Este manual proporciona instrucciones para ayudarle a disfrutar de su nuevo televisor. Muestra como conectarlo a la antena o cable, a la caja de cable, a la videograbadora, al DVD, al receptor de satélite o a la cámara de video. Una vez conectado, siga las instrucciones y utilice el control remoto para accesar a los menús de pantalla

✍ Los paneles frontales y posteriores del televisor que se ilustran en este manual corresponden a los modelos KV-25FS100. Es posible que los paneles frontales y posteriores del televisor no sean exactamente igual que los ilustrados.

Uso del interruptor MAIN POWER (alimentación principal) del televisor (solamente los modelos KV-21FS100 y KV-25FS100 con destino a Argentina)

Antes de encender el televisor utilizando el control remoto suministrado, oprima MAIN POWER, situado en la parte frontal de televisor.

Controles del menú del panel frontal



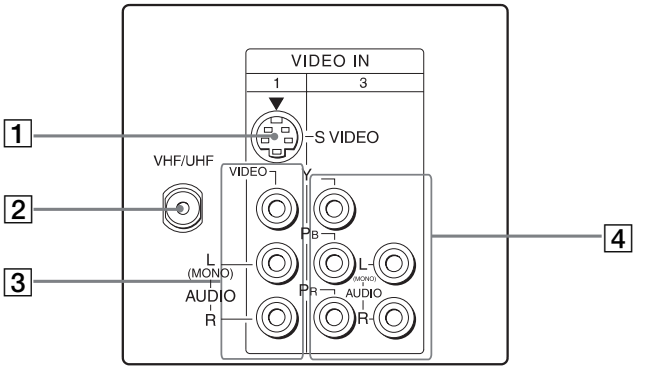
Los controles del panel de audio/video frontal le permiten accesar al menú sin control remoto. Oprima MENU para que aparezca el menú de pantalla. Utilice los botones ⊕ y ⊖ del panel de audio/video frontal en lugar de los botones ⇧ y ⇩ del control remoto. Utilice el botón ⊕ del panel de audio/video frontal en lugar de los botones ⇦, ⇨ y ⊕ del control remoto. Oprima de nuevo MENU cuando haya completado el ajuste o configuración.

Para navegar por los menús con el control remoto, consulte "Uso de los menús" en la página 19.

Conexión del televisor

Lea este capítulo antes de instalar el televisor por primera vez. Este capítulo hace referencia a las conexiones básicas, así como a cualquier otro equipo opcional que conecte.

Panel posterior del televisor



Toma	Descripción
1 **S VIDEO**	Establece una conexión con la toma S VIDEO OUT (salida de S video) de la videograbadora o de otro equipo de video con S VIDEO. S VIDEO proporciona una mejor calidad de imagen que las tomas VHF/UHF o la toma de entrada de video. S VIDEO no proporciona sonido; los cables de audio deben estar conectados.
2 **VHF/UHF**	Establece una conexión con el cable o la antena de VHF/UHF.
3 **VIDEO/ AUDIO (L/R)**	Establece una conexión con las tomas de salida de AUDIO y VIDEO de la videograbadora o de otro equipo de video. En el panel frontal del televisor existe una segunda toma de entrada de video (VIDEO 2). Estas tomas de entrada de AUDIO/VIDEO proporcionan una mejor calidad de imagen que la toma VHF/UHF.
4 **Y, P_B, P_R/ L, R**	Se conectan con las salidas de video (Y, P_B, P_R) y de audio (L/R) de su reproductor de videodiscos o de su caja digital.

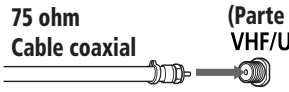
✍ Los paneles frontales y posteriores del televisor que se ilustran en este manual corresponden a los modelos KV-25FS100.

Conexiones básicas

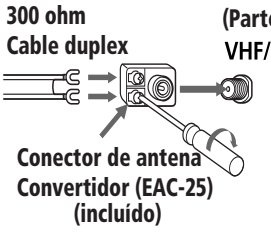
Televisor con antena interior o exterior o cable CATV

Dependiendo del cable de que disponga, elija una de las siguientes conexiones:

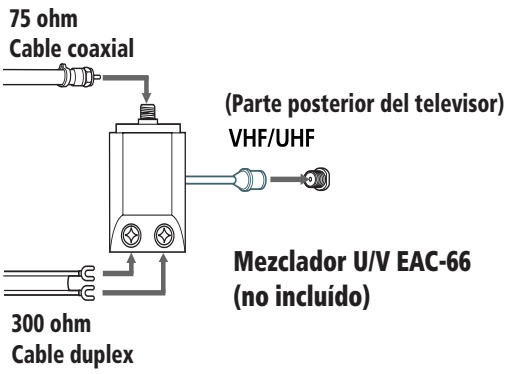
A **Sólo VHF o VHF/UHF o Cable**



B **Sólo VHF o Sólo UHF o VHF/UHF**



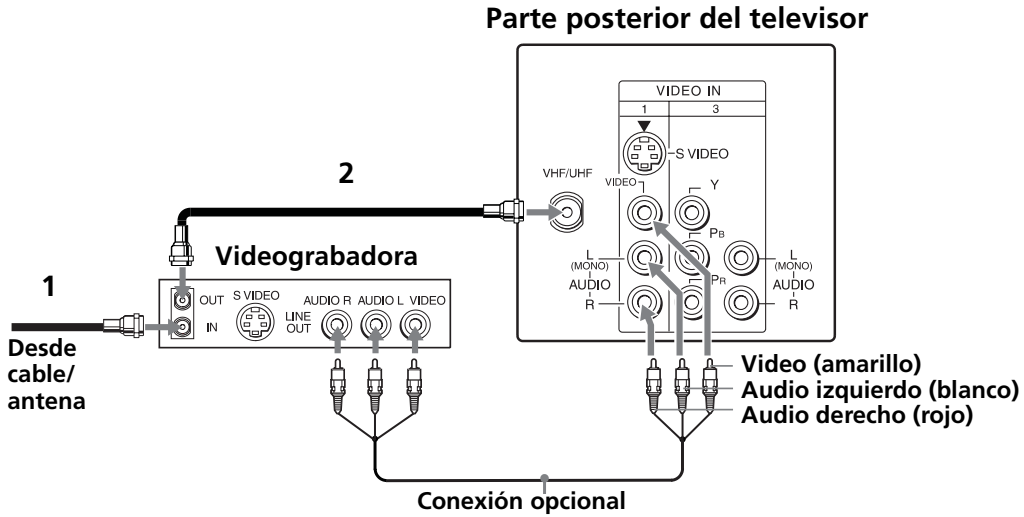
C **VHF y UHF**



✍ Si conecta el televisor a una antena interior o exterior, es posible que deba ajustar la orientación de la antena para obtener una mejor recepción.

Conexión de equipo adicional

Televisor y videograbadora



✍ Para ver programas de video desde la videograbadora, sintonice el televisor en los canales 3 ó 4 (como se indica en la parte posterior de la videograbadora).

1 Conecte el cable coaxial de la antena del televisor o del servicio de cable a la toma IN de la videograbadora.

2 Conecte el cable coaxial (no incluído) de la toma OUT de la videograbadora a la toma VHF/UHF del televisor.

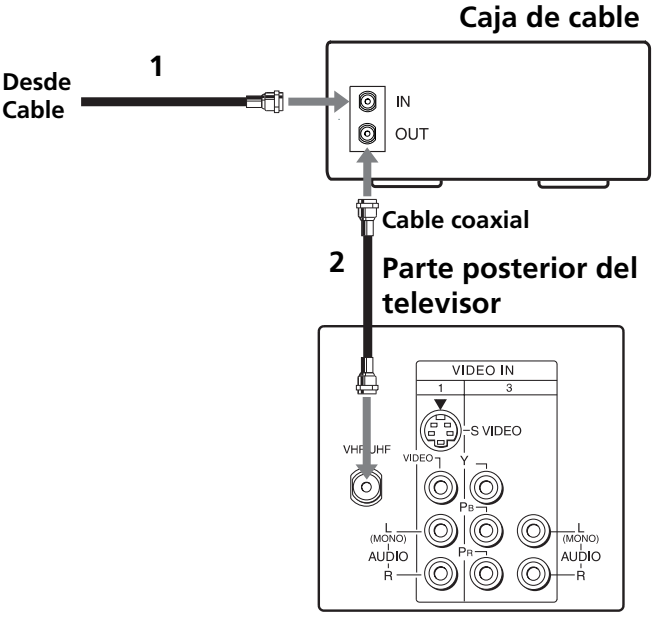
Conexión opcional

Si la videograbadora dispone de salidas de video, podrá obtener una mejor calidad de imagen conectando los cables de Audio/Video (no incluídos) de las salidas AUDIO y VIDEO OUT de la videograbadora a la entrada AUDIO/VIDEO IN del televisor.

✍ Puede utilizar el botón TV/VIDEO para cambiar entre las entradas VHF/UHF y VIDEO.

✍ Para obtener una mejor calidad de imagen, utilice S VIDEO en lugar del cable amarillo de audio/video. S VIDEO no proporciona sonido; los cables de audio deben permanecer conectados para obtener sonido.

Televisor y caja de cable



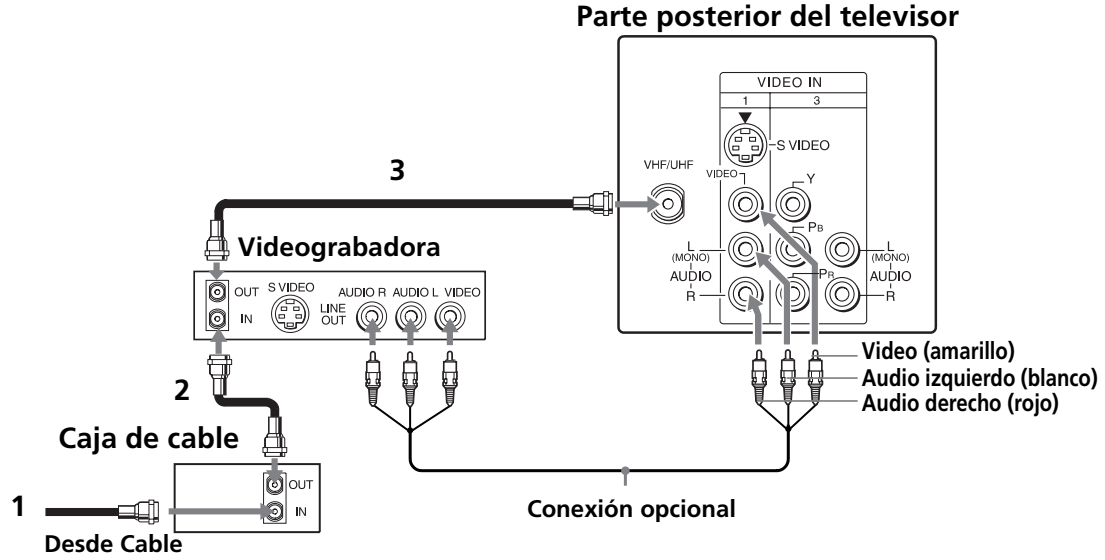
1 Conecte el cable coaxial del servicio de cable a la toma IN de la caja de cable.

2 Conecte un cable coaxial (no incluído) de la toma OUT de la caja de cable a la toma VHF/UHF del televisor.

✍ Para ver los canales desde la caja de cable, sintonice el televisor en los canales 3 ó 4 (como se indica en el panel posterior de la caja de cable) y utilice el control remoto de la caja de cable para cambiar los canales.

✍ Si desea controlar la selección de todos los canales a través de la caja de cable, es aconsejable utilizar la función Fijar Canal ajustando el televisor en el canal 3 ó 4 (consulte la página 22).

Televisor, videograbadora y caja de cable



1 Conecte el cable coaxial del servicio de cable a la toma IN de la caja de cable.

2 Conecte un cable coaxial (no incluído) desde la toma OUT de la caja de cable a la toma IN de la videograbadora.

3 Conecte un cable coaxial (no incluído) desde la toma OUT de la videograbadora a la toma VHF/UHF del televisor.

✍ Si desea controlar la selección de todos los canales a través de la caja de cable, es aconsejable utilizar la función Fijar Canal ajustando el televisor en el canal 3 ó 4 (consulte la página 22).

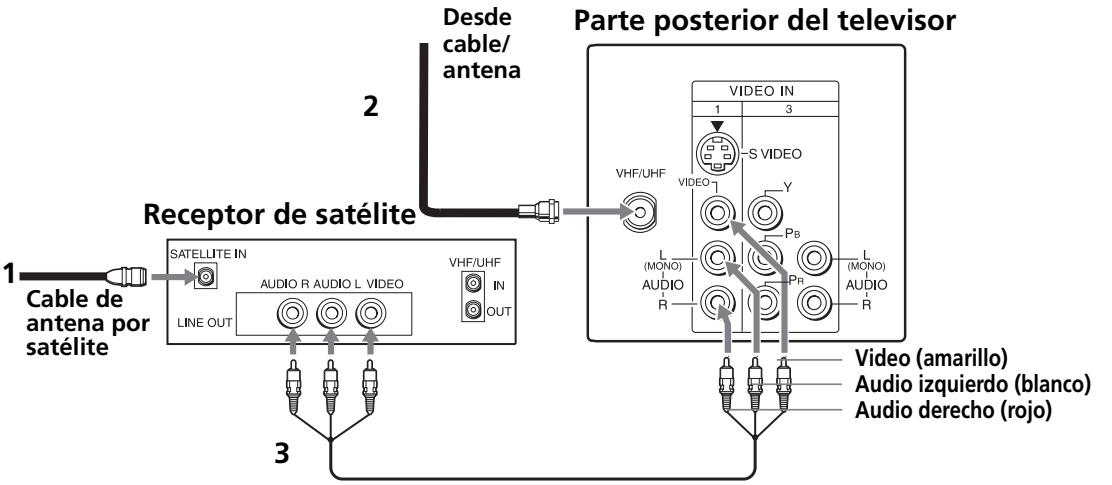
Conexión opcional

Si la videograbadora dispone de salidas de video, podrá obtener una mejor calidad de imagen conectando los cables de Audio/Video (no incluídos) desde la salida AUDIO y VIDEO OUT de la videograbadora a la toma de entrada AUDIO/VIDEO IN del televisor.

✍ Puede utilizar el botón TV/VIDEO para cambiar las entradas VHF/UHF y VIDEO.

✍ Para obtener una mejor calidad de imagen, utilice S VIDEO en lugar del cable amarillo de audio/video. S VIDEO no proporciona sonido; los cables de audio deben permanecer conectados para obtener sonido.

Televisor y receptor de satélite



1 Conecte el cable de la antena por satélite a la entrada SATELLITE IN del receptor de satélite.

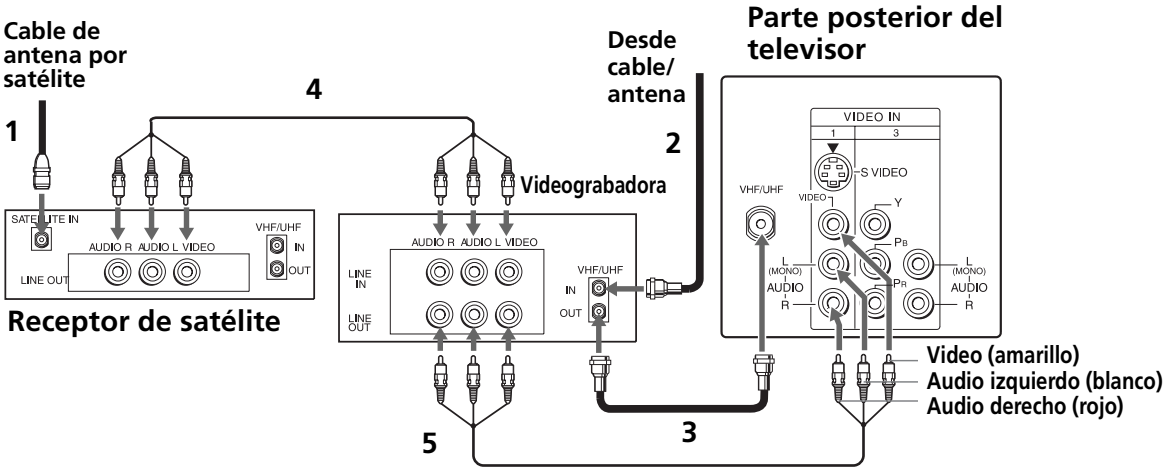
2 Conecte el cable coaxial del servicio de cable o antena a la toma VHF/UHF del televisor.

3 Utilizar cables de Audio/Video (no incluídos), conecte AUDIO y VIDEO OUT del receptor de satélite a AUDIO y VIDEO IN del televisor.

✍ Puede utilizar el botón TV/VIDEO para cambiar las entradas VHF/UHF y VIDEO.

✍ Para obtener una mejor calidad de imagen, utilice S VIDEO en lugar del cable amarillo de audio/video. S VIDEO no proporciona sonido; los cables de audio deben permanecer conectados para obtener sonido.

Televisor, receptor de satélite y videograbadora



1 Conecte el cable de la antena por satélite a la entrada SATELLITE IN del receptor de satélite.

2 Conecte el cable coaxial del servicio de cable o antena a la toma IN de la videograbadora.

3 Conecte la toma OUT de la videograbadora a la toma VHF/UHF del televisor mediante un cable coaxial (no incluído).

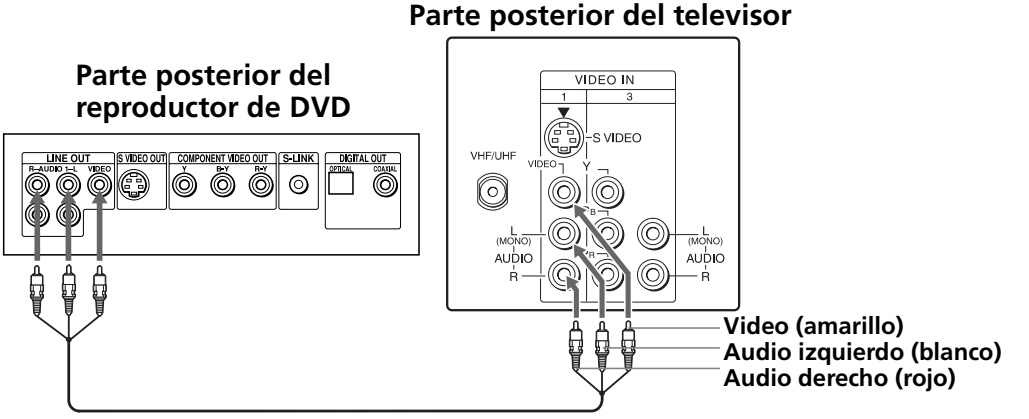
4 Conecte las tomas AUDIO y VIDEO OUT del receptor de satélite a las tomas AUDIO y VIDEO IN de la videograbadora mediante los cables de Audio/Video (no incluídos).

5 Conecte las tomas AUDIO y VIDEO OUT de la videograbadora a las tomas AUDIO y VIDEO IN del televisor mediante los cables de Audio/Video (no incluídos).

✍ Para visualizar las imágenes desde el receptor del satélite o la videograbadora, seleccione la entrada de video a la que está conectado el receptor de satélite o la videograbadora oprimiendo TV/VIDEO en el control remoto.

Conexión de un reproductor de DVD

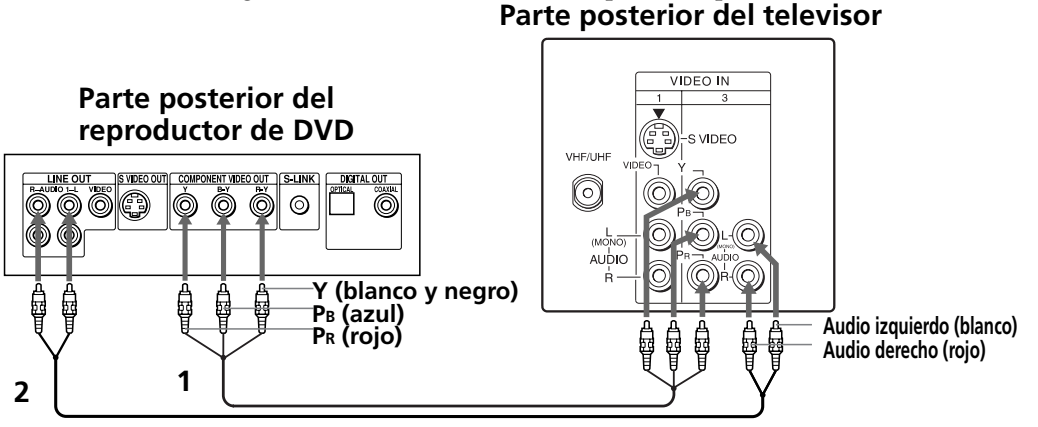
Conecte las salidas AUDIO y VIDEO OUT del reproductor DVD a las entradas AUDIO y VIDEO IN del televisor mediante los cables de Audio/Video (no incluídos).



✍ Para obtener una mejor calidad de imagen, utilice S VIDEO en lugar del cable amarillo de audio/video. S VIDEO no proporciona sonido; los cables de audio deben permanecer conectados para obtener sonido.

Conexión opcional

Si el reproductor de DVD dispone de salidas de video para componentes (Y, P_B, P_R), podrá optimizar la calidad de imagen utilizando cables de video para componentes.



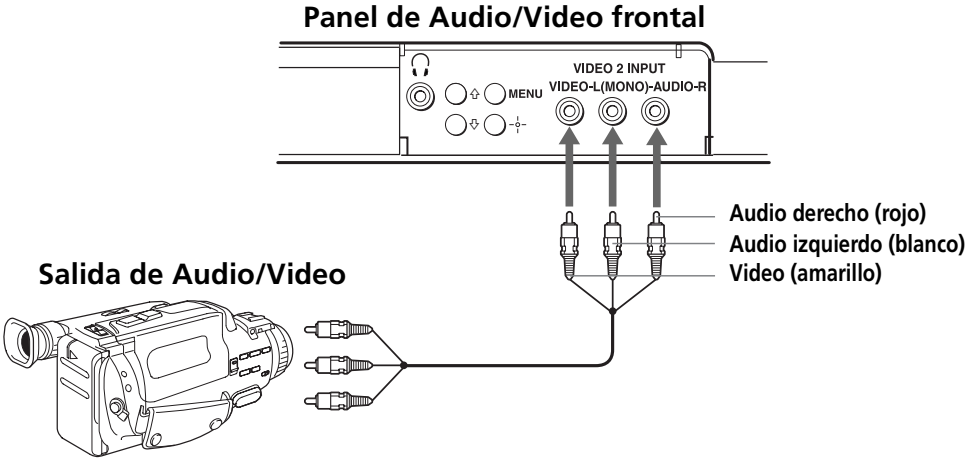
1 Conecte las tomas Y, P_B, P_R OUT del reproductor de DVD a las tomas Y, PB, PR IN del televisor mediante los cables de video para componentes.

2 Conecte la toma AUDIO OUT del reproductor de DVD a la toma AUDIO IN del televisor.

✍ Las salidas Y, P_B, P_R del reproductor de DVD algunas veces están etiquetadas como Y, C_B, y C_R o Y, B-Y y R-Y. Si es así, conecte los cables rigiéndose por los colores.

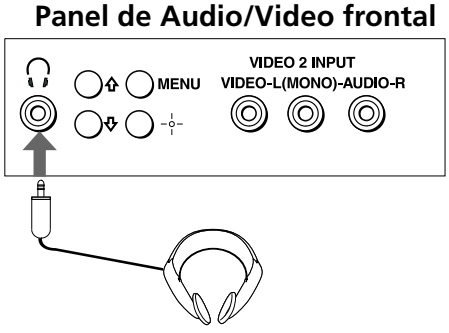
Conexión de una cámara de video

Conecte las salidas AUDIO y VIDEO OUT de la cámara de video a las entradas AUDIO y VIDEO INPUT del televisor mediante los cables de Audio/Video (no incluídos).



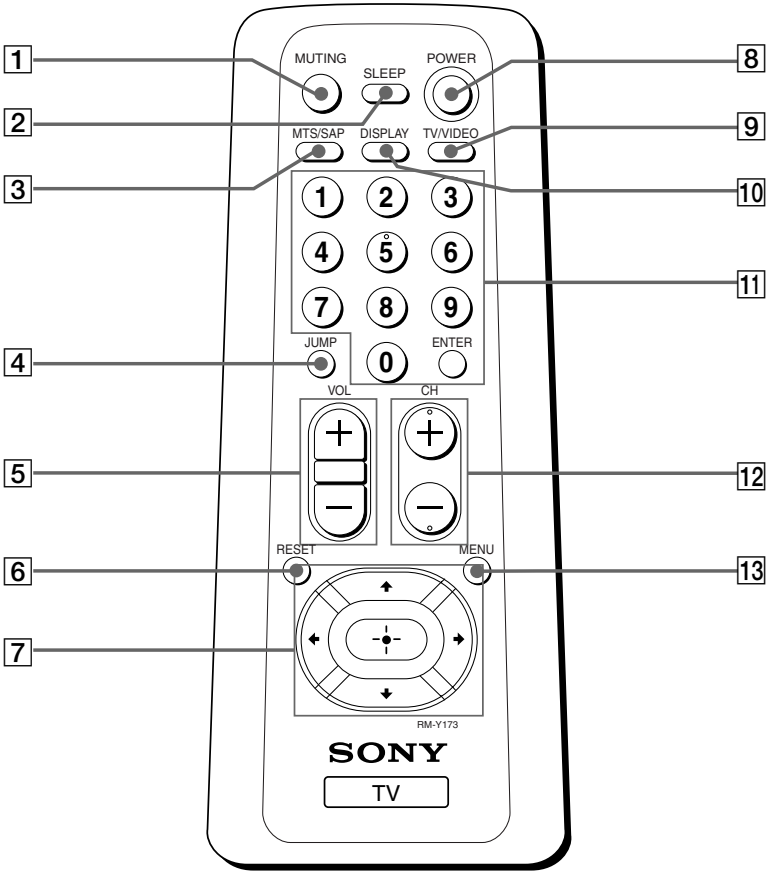
Conexión de audífonos

Conecte los audífonos a la toma ∩ situada en la parte frontal del televisor.

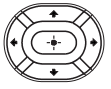


Uso del control remoto y funciones básicas

Este capítulo muestra cómo utilizar todos los botones del control remoto y los menús de pantalla.



Uso del control remoto

Botón	Descripción
1 **MUTING**	Desactiva el sonido de forma instantánea. Oprímalo de nuevo u oprima VOL + para restaurar el sonido.
2 **SLEEP**	Apaga automáticamente el televisor en aproximadamente 15, 30, 45, 60 ó 90 minutos. Para cancelar, oprima hasta que aparezca SLEEP OFF.
3 **MTS/SAP**	Muestra las distintas opciones de sonido multicanal del televisor (MTS): Estéreo, Mono, y Auto SAP (Segundo Programa de Audio).
4 **JUMP**	Oprima para alternar entre dos canales. El televisor cambia del canal actual al canal anterior seleccionado.
5 **VOL (volumen)**	Oprímalo cuando desee ajustar el volumen.
6 **RESET**	Oprímalo para volver a la configuración de fábrica desde un menú de pantalla.
7 	Mueve el cursor en los menús de pantalla. Oprima los botones de flecha para mover el cursor y a continuación oprima el botón central para seleccionar o acceder a una opción.
8 **POWER**	Oprímalo cuando desee encender ó apagar el televisor.
9 **TV/VIDEO**	Alterna las entradas de video disponibles.
10 **DISPLAY**	Oprímalo para mostrar la hora actual (si está ajustada) y el número de canal. Oprímalo de nuevo para desactivar DISPLAY.
11 **0-9 y ENTER**	Oprima los botones 0-9 para seleccionar un canal después oprima ENTER para que cambie de inmediato.
12 **CH (canal)**	Oprímalo cuando desee cambiar canales.
13 **MENU**	Muestra el menú de pantalla. Oprímalo de nuevo para salir del menú en cualquier momento.

✍ Si pierde el control remoto, consulte la página 28.

Programación automática del televisor

Cuando haya terminado de conectar el televisor, puede ajustar los canales mediante Autoprogramación.

1 Oprima POWER para encender el televisor. Aparecerá la pantalla de Ajustes Iniciales. Para KV-21FS100 y KV-25FS100 con destino a Argentina: Oprima MAIN POWER antes de oprimir POWER para encender el televisor.

2 Oprima CH + en el control remoto o en el panel frontal del televisor para activar Autoprogramación u oprima CH – para salir.

✍ La pantalla de Ajustes Iniciales aparecerá cada vez que encienda el televisor hasta que realice Autoprogramación.

Para volver a activar Autoprogramación

1 Oprima MENU.

2 Oprima ⇨ para seleccionar Ajuste de Canal (CH).

3 Oprima ⇩ para seleccionar Cable. Oprima ⊕ para seleccionar.

4 Oprima ⇧ o ⇩ para seleccionar Si o No según el estado del televisor. Oprima ⊕.

5 Oprima ⇩ para seleccionar Autoprogramación. Oprima ⊕ para buscar los canales.

✍ Una vez finalizada la función Autoprogramación, oprima MENU para salir.

Acceso rápido a los menús

Los ajustes siguientes están disponibles en los menús de pantalla.

Menú	Permite
	Modificar los ajustes de la imagen.
	Cambiar el ajuste de audio.
	Personalizar el ajuste de los canales.
	Bloquear los canales no deseados.

Menú	Permite
	Ajustar el reloj del televisor y programar el encendido y apagado automático del televisor en un canal establecido mediante Timer 1 y Timer 2 (Reloj 1 y Reloj 2).
	Seleccionar los modos de subtítulos, etiquetar las entradas de video, corregir la inclinación de la imagen, seleccionar el idioma de los menús o ejecutar una demostración de los menús.

Uso de los menús

Este capítulo muestra las opciones disponibles para configurar y ajustar el televisor.

Para accesar a un menú

1. Oprima MENU para que aparezca el menú de pantalla.
2. Utilice los botones ⇦ o ⇨ para seleccionar el menú deseado y despues oprima ⊕.
3. Utilice los botones ⇧ o ⇩ para seleccionar la opción deseada y despues oprima ⊕.
4. Siga las indicaciones que aparecen en pantalla para activar las opciones deseadas. Oprima ⊕ para terminar el ajuste.
5. Oprima MENU para salir del menú.

✍ Oprima MENU una vez para que aparezca el menú en pantalla y oprímalo de nuevo para que desaparezca. Si no se oprime ningún botón, el menú se cierra automáticamente transcurridos 90 segundos aproximadamente.

Uso del menú de Video

Para accesar al menú Video, siga los siguientes pasos:

Control de Imagen	Oprima ⇨ para abrir el menú Control de Imagen: **Contraste:** Oprima ⇦ para disminuir el contraste. Oprima ⇨ para aumentar el contraste. **Brillo:** Oprima ⇦ para oscurecer la imagen. Oprima ⇨ para aumentar el brillo de la imagen. **Color:** Oprima ⇦ para disminuir la intensidad de color. Oprima ⇨ para aumentar la intensidad de color. **Tinte:** Oprima ⇦ para aumentar los tonos rojos. Oprima ⇨ para aumentar los tonos verdes. **Nitidez:** Oprima ⇦ para suavizar la imagen Oprima ⇨ para aumentar la nitidez de la imagen.
Temperatura del Color *Ajuste de la tonalidad del blanco*	Oprima ⇧ o ⇩ para seleccionar una de las opciones siguientes: **Frío:** Proporciona a los colores blancos una tonalidad azulada. **Neutro:** Proporciona a los colores blancos una tonalidad neutra. **Cálido:** Proporciona a los colores blancos una tonalidad rojiza.
VM *Modulación de velocidad*	Aumenta la nitidez de la definición de la imagen y proporciona a los objetos un contorno más nítido y limpio. Oprima ⇧ o ⇩ para seleccionar una de las opciones siguientes: **No, Alto, Bajo**.

Uso del menú Audio

Para accesar al menú Audio, siga los siguientes pasos :

MTS
Sonido multicanal del televisor

Oprima ⇧ o ⇩ para seleccionar una de las siguientes opciones:
Estéreo: Seleccione esta opción cuando visualice una emisión en estéreo.
Mono: Seleccione esta opción para reducir el ruido en zonas de difícil recepción.
Auto SAP: Seleccione esta opción para que el televisor cambie automáticamente a Segundo Programa de Audio (SAP) cuando reciba la señal.

✍ Oprima MTS/SAP para accesar directamente a los ajustes de MTS (Estéreo, Mono, Auto SAP)

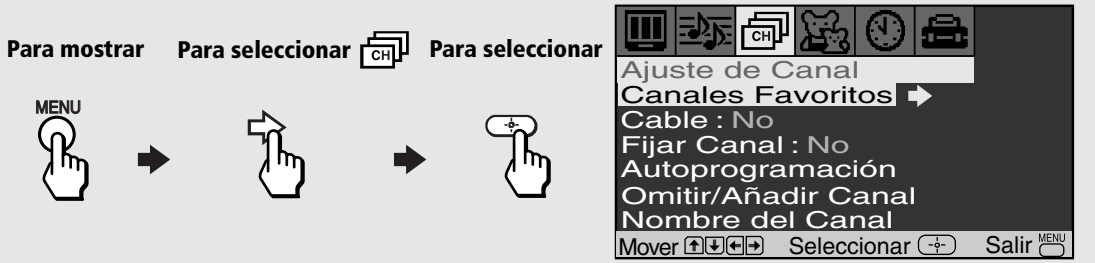
Realce de graves

Proporciona tonos graves más profundos e intensos. Oprima ⇧ o ⇩ para seleccionar Si o No.

✍ Si el televisor está en modo Auto SAP, algunos programas se silenciarán o se distorsionarán. Si el televisor no emite sonido, cambie el ajuste de audio a Estéreo o Mono.

Uso del menú Ajuste de Canal

Para accesar al menú Ajuste de Canal, siga los siguientes pasos:



Canales Favoritos
Acceso rápido a los canales favoritos

Oprima ⇨ para abrir el menú Canales Favoritos:

1. Utilice el botón ⇧ o ⇩ para seleccionar la posición (1-5) donde desea ajustar un canal favorito. A continuación oprima ⊕.
2. Utilice el botón ⇧ o ⇩ para seleccionar el canal deseado.
3. Oprima ⊕ para cambiar al canal seleccionado.
4. Oprima ⇦ para volver al menú Ajuste de Canal u oprima MENU para salir.

✍ Para utilizar Canales Favoritos: Salga de todos los menús y oprima ⊕. Oprima ⇧ o ⇩ para desplazar el cursor al número de canal deseado y oprima ⊕.

Cable

Si: Selecciónelo si recibe canales vía cable con un cable CATV.
No: Selecciónelo si utiliza una antena de televisión.

✍ Después de cambiar los ajustes del cable, deberá realizar la función Autoprogramación.

Fijar Canal

2-6: Seleccione esta opción cuando desee controlar la selección de todos los canales a través de la caja de cable o de la videograbadora. Seleccione el canal adecuado (normalmente el 3 ó 4) y utilice el control remoto de la caja de cable o de la videograbadora para seleccionar los canales.
Video 1: Seleccione esta opción desde las entradas de video disponibles cuando haya conectado el equipo de video (por ejemplo, el receptor de satélite) y desee que quede fijado en el televisor.
No: Fijar Canal no está activado.

Autoprogramación

Realice la función Autoprogramación siempre que ajuste el televisor. Recorrerá todos los canales disponibles y programará los que se reciben.

Omitir/Añadir Canal

Utilice esta función después de ejecutar Autoprogramación para omitir los canales no deseados o para añadir nuevos canales. Oprima ⇨ para abrir el menú Omitir/Añadir Canal:

1. Utilice los botones ⇧ o ⇩ para seleccionar la posición del canal deseado y a continuación oprima ⊕.
2. Oprima el botón ⇧ o ⇩ para omitir o añadir canales y a continuación oprima ⊕.
3. Oprima ⇦ para volver al menú Ajuste de Canal u oprima MENU ○ para salir.

✍ Cuando oprima CH+ o CH- no tendrá acceso a los canales omitidos, sólo a través de los botones ⓪-⑨ podrá accesarlos.

Nombre del Canal

Etiqueta hasta 40 canales con sus letras de llamada

Oprima ⇨ para abrir el menú Nombre del Canal:

1. Oprima ⊕ y a continuación oprima ⇧ o ⇩ hasta que localice el número de canal deseado.
2. Oprima ⊕ para activar el canal.
3. Oprima ⊕ y a continuación oprima el botón ⇧ o ⇩ para mostrar la primera letra de llamada o número de captura y a continuación oprima ⊕ para seleccionarlo. Cuando termine, oprima ⊕ para activar el canal.

✍ Los modos Canales Favoritos, Omitir/Añadir Canal, Nombre del Canal, Cable y Bloqueo de Canal no se pueden utilizar cuando Fijar Canal está activado, o la televisión se encuentra en los modos de video.

Uso del menú Bloqueo de Canal

Para accesar al menú Bloqueo de Canal, siga los siguientes pasos:

✍ Cuando entre al menú Bloqueo de Canal, el canal seleccionado es el canal que está visualizando.

Con el menú Bloqueo de Canal abierto:

Bloquear o Desbloquear

1. Utilice los botones ⇧ o ⇩ para elegir el canal deseado y a continuación oprima ⊕ para seleccionarlo.
2. Utilice los botones ⇧ o ⇩ para bloquear o desbloquear el canal seleccionado y a continuación oprima ⊕.
3. Oprima MENU para salir.

✍ Si un canal está bloqueado, se mostrará una pantalla negra con la palabra "Programa Bloqueado" (solamente para el uso habitual del televisor). La función Bloqueo de Canal se desactiva en los modos de Video.

Uso del menú Timer (Reloj)

Para accesar al menú Timer (Reloj), siga los siguientes pasos:

Hora Actual

Muestra el día y la hora actual. Oprima ⇨ para abrir el menú de Hora Actual.

1 Utilice los botones ⇧ o ⇩ para introducir el día y la hora correcta y a continuación oprima ⊕.

2 Oprima MENU para salir del menú.

✍ Debe ajustar la hora actual antes de poder utilizar Timer 1 y Timer 2 (Reloj 1 y Reloj 2).

Timer 1 y Timer 2 (Reloj 1 y Reloj 2)
Visualización programada

Programa su televisor al día, hora, duración y canal deseado. La programación máxima es de 6 horas. Cuando el canal esté fijado no será necesario introducirlo. Oprima ⇨ para abrir el menú de Timer 1 o Timer 2.

1 Oprima ⇧ o ⇩ para seleccionar Timer 1 o Timer 2 (Reloj 1 y Reloj 2) y a continuación oprima ⊕.

2 Oprima ⇧ o ⇩ para introducir el día, hora, duración y el canal deseado y a continuación oprima ⊕.

3 Oprima MENU para salir del menú.

✍ Puede fijar Timer en las posiciones Si, No o Ajustar. Cuando Timer 1 y Timer 2 (Reloj 1 y Reloj 2) esté ajustado podrá activarlo y desactivarlo sin tener que revisar los ajustes.

✍ Al ejecutar Autoprogramación, los ajustes de Timer 1 y Timer 2 (Reloj 1 y Reloj 2) se borrarán. Asi mismo, en caso de producirse una pérdida de electricidad, los ajustes de Hora Actual, Timer 1 y Timer 2 (Reloj 1 y Reloj 2) se borrarán.

Uso del menú Ajustes

Para accesar al menú Ajustes, siga los siguientes pasos:

Caption Vision *Subtítulos*	Permite seleccionar tres modos de subtítulos (para programas que se emiten con subtítulos). Oprima ⇧ o ⇩ para seleccionar una de las siguientes opciones: **CC1, 2, 3, 4:** Muestra el diálogo impreso y los efectos de sonido de un programa. **Text1, 2, 3, 4:** Muestra información sobre la red/emisora. **XDS:** Muestra el nombre del programa actual y el tiempo restante, si está disponible. **No:** Los subtítulos no están activados.
Etiqueta de Video *Etiqueta el equipo conectado*	Permite etiquetar los componentes de audio/video que tiene conectado a su televisor: VCR, DVD, etc. Con la ventana Etiqueta de Video abierta: **1** Oprima ⇧ o ⇩ para accesar a la entrada que desea etiquetar y oprima ⊕. **2** Oprima ⇧ o ⇩ para elegir una etiqueta y oprima ⊕.
Rotación	Oprima ⇧ o ⇩ para corregir la inclinación de la imagen entre - 5 y +5 y a continuación oprima ⊕ para activarla.
Idioma	Muestra todos los menús en el idioma elegido. Oprima ⇧ o ⇩ para seleccionar el idioma deseado (Español, Inglés, Francés) y oprima ⊕.
Demo (Demostración)	Oprima ⊕ para ejecutar una demostración de los menús de pantalla.

✍ Puede oprimir cualquier tecla para salir del modo Demo (Demostración).

Sistema de Color	**Sólo en los modelos KV-21FS100 y KV-25FS100 con destino a Argentina** Seleccione las configuraciones siguientes para las entradas TV, Video 1 y Video 2: AUTO, NTSC, PAL-M, PAL-N.

Información adicional

Solución de problemas

Si tiene problemas con el televisor, intente seguir las indicaciones que se sugieren a continuación. Si el problema persiste, consulte con su proveedor Sony más cercano.

No hay imagen ni sonido	❏ Asegúrese que el cable de alimentación esté conectado. ❏ Si hay una luz roja que parpadea en la parte frontal del televisor durante algunos minutos, desconecte y vuelva a conectar el cable de alimentación para restaurar el televisor. Si el problema persiste, llame al servicio técnico local. ❏ Compruebe los ajustes TV/VIDEO: cuando utilice el televisor, ajustelos en TV; cuando utilice el equipo de video, ajustelo en VIDEO (página 14). ❏ Asegúrese de que las baterias están insertadas correctamente en el control remoto (página 2). ❏ Inténtelo con otro canal; podría ser problema de la emisora.
Imagen de baja calidad o sin imagen, buen sonido	❏ Ajuste Contraste en la opción Video del menú Control de Imagen (página 20). ❏ Ajuste Brillo en la opción Video del menú Control de Imagen (página 20). ❏ Compruebe las conexiones de la antena y/o del cable (página 4).
Buena Imagen, sin sonido	❏ Oprima MUTING para que desaparezca MUTING de la pantalla (página 14). ❏ Compruebe los ajustes de Audio. Es posible que el televisor esté en modo Auto SAP (página 21).
Sin color	❏ Ajuste Color en la opción Video del menú Control de Imagen (página 20).
Sin señal	❏ Compruebe el ajuste del cable en el menú Ajuste de Canal (página 22). ❏ Compruebe las conexiones de la antena y/o del cable (página 4). ❏ Asegúrese de que el canal seleccionado esté emitiendo.
Líneas de puntos o rayas	❏ Ajuste la antena. ❏ Aparte el televisor de cualquier otro equipo electrónico. Algunos equipos electrónicos pueden crear ruidos eléctricos que interfieran con la recepción del televisor.
Imágenes dobles o fantasmas	❏ Revise la antena exterior o llame al servicio técnico del cable.

No se reciben canales con un número alto (UHF) cuando se utiliza una antena	❏ Asegúrese de que Cable esta en la posición No en el menú Ajuste de Canal (página 22). ❏ Ejecute Autoprogramación para añadir canales que actualmente no estén en la memoria (página 15).
Las emisoras del cable parece que no funcionan	❏ Asegúrese de que Cable esta en la posición Sí en el menú Ajuste de Canal (página 22). ❏ Ejecute Autoprogramación para añadir canales que actualmente no estén en la memoria (página 15).
El control remoto no funciona	❏ Las baterias podrían estar bajas. Sustitúyalas (página 2). ❏ Coloque el televisor a unos 90-120 cm o más de las luces fluorescentes.
El televisor está sucio	❏ Limpie el televisor con un paño suave y seco. No utilice nunca disolventes fuertes como diluyentes o bencina, puesto que podría dañar el acabado de la unidad.
Ha perdido el control remoto	❏ Puede utilizar los controles del panel de audio/video frontal para acceder al menú (página 2). Póngase en contacto con su proveedor Sony más cercano para solicitar un control remoto de repuesto.

Si después de leer este manual de instrucciones, tiene más preguntas relacionadas con la utilización del televisor Sony, póngase en contacto con su proveedor Sony más cercano para recibir asistencia técnica.

Especificaciones

Para todos los modelos (excepto los indicados)

Sistema de televisión	Estándar de televisión americana/NTSC (KV-21FS100, KV-25FS100) PAL-M/PAL-N/NTSC (KV-21FS100, KV-25FS100, con destino a Argentina)
Cobertura de canales	VHF: 2-13/UHF: 14-69/CATV: 1-125
Antena	Terminal de antena externa para VHF/UHF de 75 ohm
Tubo de imagen	Tubo FD Trinitron®
Requisitos de alimentación para todos los países excepto en donde se indique:	ca 120 V 60 Hz ca 220 V 50/60 Hz (Chile, Perú, Bolivia) ca 120 - 220 V 50/60 Hz (Argentina)
Accesorios incluídos	Baterías de tamaño AA (R6) (2) Control remoto RM-Y173 (1) Antena dipolo (1) Convertidor (EAC-25) (1)
Accesorios opcionales	Cables de conexión VMC-810S/820S, VMC-720M, YC-YC-15V/30V, RK74A Mezclador EAC-66 U/V
KV-21FS100	
Tamaño de la pantalla	Tamaño de pantalla visible: 508 mm (20 pulgadas) medido en diagonal Tamaño de pantalla real: 533,4 mm (21 pulgadas) medido en diagonal
Entradas/salidas	2 de video, 2 de audio 1 Y, P_B, P_R, 1 audio 1 conector para audífonos
Salida de la bocina	5 W x 2
Consumo de energía para todos los países excepto en donde se indique:	120 W 115 W (Chile, Perú, Bolivia) 1 W en espera
Dimensiones (An./Al./Prf.):	592 x 466 x 494 mm ($23\frac{1}{4}$ x $18\frac{3}{8}$ x $19\frac{1}{2}$ pulgadas)
Peso	24,8 kg (54 lbs. 10 oz.)
KV-25FS100	
Tamaño de la pantalla	Tamaño de pantalla visible: 610 mm (24 pulgadas) medido en diagonal Tamaño de pantalla real: 635 mm (25 pulgadas) medido en diagonal
Entradas/salidas	2 de video, 2 de audio, 1 S VIDEO 1 Y, P_B, P_R, 1 audio 1 conector para audífonos
Salida de la bocina	7.5 W x 2
Consumo de energía para todos los países excepto en donde se indique:	145 W 140 W (Chile, Perú, Bolivia) 1 W en espera
Dimensiones (An./Al./Prf.):	704 x 524 x 472 mm ($27\frac{3}{4}$ x $20\frac{5}{8}$ x $18\frac{1}{2}$ pulgadas)
Peso	35 kg (77 lbs. 1 oz.)

El diseño y las especificaciones están sujetos a cambios sin previo aviso.

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SERVICE MANUAL

BA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-24FS100	RM-Y173	US	SCC-S61D-A
KV-24FS100	RM-Y173	CND	SCC-S59D-A
KV-25FS100	RM-Y173	LATIN NORTH	SCC-S60J-A
KV-25FS100	RM-Y173	LATIN SOUTH	SCC-S60K-A

CORRECTION- 1

SUBJECT: SCREEN (G2) INSTRUCTIONS
A BOARD IC VOLTAGE LIST

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 2: Set-Up Adjustments (Page 13)
2-4. Screen (G2) added Step #4 to instructions

Section 5: Diagrams (Page 34)
Replaced A Board IC Voltage List

TRINITRON® COLOR TELEVISION

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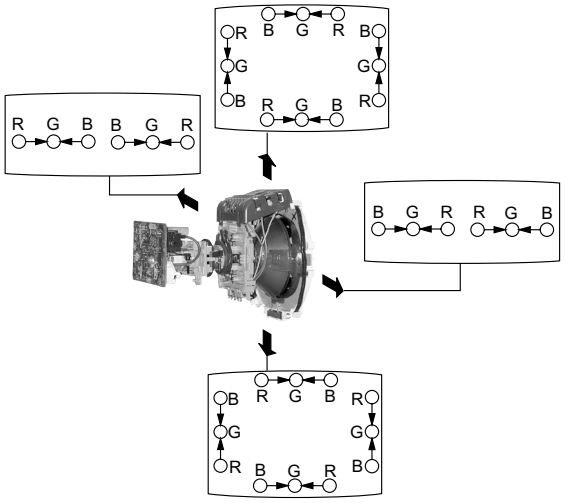
DYNAMIC CONVERGENCE ADJUSTMENT

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

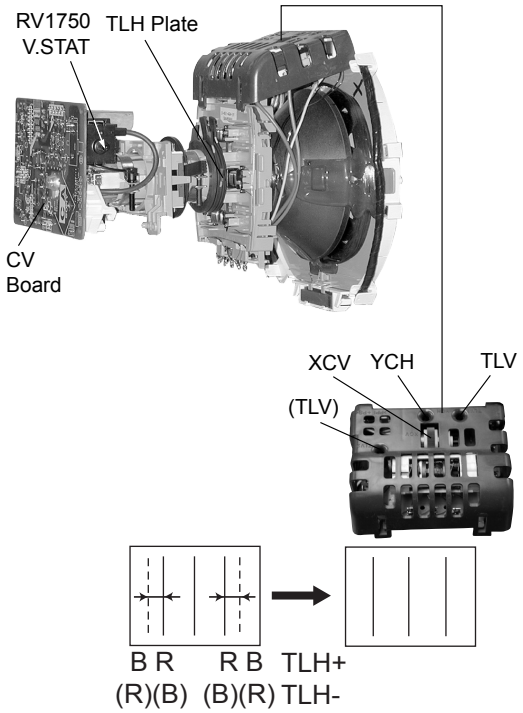
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below:



4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

TLH PLATE ADJUSTMENT

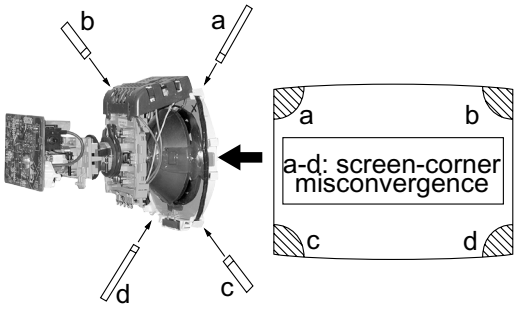
1. Input crosshatch pattern.
2. Adjust PICTURE QUALITY to standard, PICTURE and BRIGHTNESS to 50%, and OTHER to standard.
3 Adjust the Horizontal Convergence of red and blue dots by tilting the TLH plate on the deflection yoke.



4. Adjust XCV core to balance X axis.
5. Adjust YCH VR to balance Y axis.
6. Adjust vertical red and blue convergence with V.TILT (TLV VR.)
   Note: Perform adjustment 3-6 while tracking items 1 and 2.

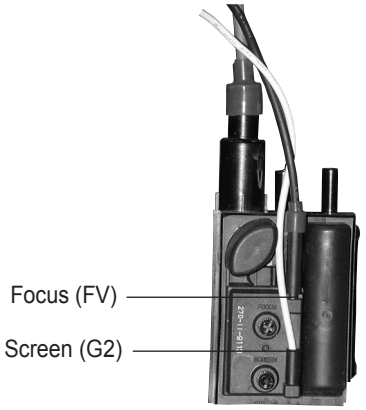
SCREEN-CORNER CONVERGENCE

1. Affix a permalloy assembly corresponding to the misconverged areas:



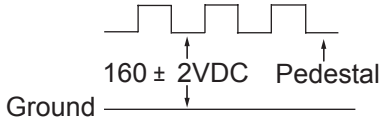
2-3. FOCUS

1. Adjust FOCUS control for best pictures.



2-4. SCREEN (G2)

1. Input a dot pattern.
2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 160 ± 2VDC.



4. Observe the screen and adjust SCREEN (G2) VR in FBT to obtain the faintly visible background of dot signal.

A BOARD IC VOLTAGE LIST

IC001		44	1.6	7	GND	12	7.0	8	17.2
PIN	**VOLT**	45	1.6	8	5.0	**IC545**		9	GND
1	N/C	46	2.3	**IC003**		**PIN**	**VOLT**	10	10.4
2	GND	47	1.0	**PIN**	**VOLT**	1	0.7	11	0.0
3	2.2	48	N/C	1	N/C	2	13.5	12	4.6
4	2.2	49	0.5	2	GND	3	-12.2	13	N/C
5	GND	50	1.2	3	GND	4	-13.3	14	163.6
6	5.0	51	2.0	4	5.0	5	0.2	15	153.5
7	0.0	52	1.5	5	5.0	6	13.8	16	157.6
8	2.0	53	4.8	**IC004**		7	0.7	17	N/C
9	0.3	54	4.8	**PIN**	**VOLT**	**IC561**		18	1.7
10	2.1	55	4.8	1	5.0	**PIN**	**VOLT**	**IC603**	
11	5.0	56	4.8	2	5.0	1	0.1	**PIN**	**VOLT**
12	GND	57	N/C	3	GND	2	3.4	I	12.0
13	3.3	58	5.2	**IC401**		3	2.3	G	GND
14	3.1	59	0.0	**PIN**	**VOLT**	4	GND	O	9.0
15	1.0	60	0.0	1	4.5	5	9.2	**IC604**	
16	1.5	61	0.0	2	0.3	6	10.2	**PIN**	**VOLT**
17	3.3	62	0.0	3	4.5	7	0.1	1	133.7
18	0.5	63	1.4	4	0.3	8	13.5	2	N/C
19	1.1	64	4.9	5	4.5	**IC565**		3	2.5
20	GND	65	4.9	6	4.5	**PIN**	**VOLT**	4	11.3
21	0.5	66	0.0	7	0.0	1	3.4	5	GND
22	1.7	67	0.1	8	4.5	2	3.4	**IC608**	
23	0.5	68	0.1	9	4.5	3	2.1	**PIN**	**VOLT**
24	0.5	69	2.4	10	N/C	4	9.0	I	11.0
25	0.5	70	5.0	11	4.4	5	1.0	O	5.0
26	0.0	71	5.0	12	0.0	6	1.0	G	GND
27	0.0	72	0.1	13	4.5	7	1.0	**IC633**	
28	2.1	73	0.0	14	9.0	8	1.6	**PIN**	**VOLT**
29	2.7	74	5.0	15	4.4	9	1.6	I	9.0
30	3.3	75	5.0	16	GND	10	1.6	G	GND
31	2.9	76	5.0	**IC404**		11	GND	O	3.3
32	GND	77	0.1	**PIN**	**VOLT**	12	1.6		
33	2.8	78	0.0	1	14.6	13	1.6		
34	3.3	79	4.9	2	7.0	14	1.6		
35	2.9	80	4.9	3	GND	**IC600**			
36	GND	**IC002**		4	7.0	**PIN**	**VOLT**		
37	1.8	**PIN**	**VOLT**	5	5.9	1	2.5		
38	0.0	1	GND	6	0.0	2	1.8		
39	0.1	2	GND	7	GND	3	2.2		
40	2.0	3	GND	8	0.0	4	2.5		
41	1.6	4	GND	9	0.5	5	GND		
42	3.3	5	4.8	10	7.2	6	0.0		
43	N/C	6	4.8	11	GND	7	4.0		

All voltages are in V.

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
2002IJ74WEB-1
Printed in USA
© 2002.9

9-965-928-91

SERVICE MANUAL

BA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-24FS100	*RM-Y173*	*US*	*SCC-S61D-A*
KV-24FS100	*RM-Y173*	*CND*	*SCC-S59D-A*
KV-25FS100	*RM-Y173*	*LATIN NORTH*	*SCC-S60J-A*
KV-25FS100	*RM-Y173*	*LATIN SOUTH*	*SCC-S60K-A*

CORRECTION - 2

SUBJECT: REPLACED A BOARD TRANSISTOR VOLTAGE LIST (Q600, Q601)
REPLACED A BOARD IC VOLTAGE LIST (IC600)

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Items

SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS

A Board Transistor Voltage List (Page 33)

A Board IC Voltage List (Page 34)

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SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS (Page 33)

A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E		B	C	E
Q002	0.0	2.0	GND	**Q405**	0.0	0.0	GND
Q004	3.8	9.0	4.4	**Q411**	0.0	5.8	GND
Q005	5.1	0.8	5.0	**Q412**	0.1	0.1	GND
Q006	0.0	0.0	GND	**Q435**	0.0	GND	5.8
Q008	0.0	2.6	GND	**Q501**	0.0	14.3	GND
Q009	0.0	5.2	GND	**Q502**	0.0	74.1	GND
Q300	1.8	9.0	2.4	**Q505**	0.0	131.8	0.0
Q301	3.6	2.1	3.6	**Q521**	0.0	3.8	GND
Q303	3.6	GND	2.8	**Q522**	0.1	-2.1	0.0
Q304	3.6	GND	2.9	**Q572**	0.0	2.6	GND
Q305	3.6	GND	3.0	**Q573**	2.6	0.0	2.6
Q306	5.5	GND	4.9	**Q578**	0.0	0.5	GND
Q390	0.8	1.5	1.9	**Q590**	133.7	0.0	134.2
Q391	0.6	3.3	1.5	**Q604**	30.6	11.6	30.2
Q400	0.0	0.1	GND	**Q608**	0.0	6.7	GND
Q401	0.0	0.1	GND	**Q650**	5.8	9.0	5.0
Q404	0.0	0.0	GND				

All voltages are in V.

	D	G	S
Q600	340.0	160.0	156.0
Q601	155.0	4.9	0.0

SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS (Page 34)

A BOARD IC VOLTAGE LIST

IC001	
PIN	**VOLT**
1	N/C
2	GND
3	2.2
4	2.2
5	GND
6	5.0
7	0.0
8	2.0
9	0.3
10	2.1
11	5.0
12	GND
13	3.3
14	3.1
15	1.0
16	1.5
17	3.3
18	0.5
19	1.1
20	GND
21	0.5
22	1.7
23	0.5
24	0.5
25	0.5
26	0.0
27	0.0
28	2.1
29	2.7
30	3.3
31	2.9
32	GND
33	2.8
34	3.3
35	2.9
36	GND
37	1.8
38	0.0
39	0.1
40	2.0
41	1.6
42	3.3
43	N/C

44	1.6
45	1.6
46	2.3
47	1.0
48	N/C
49	0.5
50	1.2
51	2.0
52	1.5
53	4.8
54	4.8
55	4.8
56	4.8
57	N/C
58	5.2
59	0.0
60	0.0
61	0.0
62	0.0
63	1.4
64	4.9
65	4.9
66	0.0
67	0.1
68	0.1
69	2.4
70	5.0
71	5.0
72	0.1
73	0.0
74	5.0
75	5.0
76	5.0
77	0.1
78	0.0
79	4.9
80	4.9

IC002	
PIN	**VOLT**
1	GND
2	GND
3	GND
4	GND
5	GND
6	4.8
7	4.8
8	4.8
9	4.8
10	4.8
11	4.8

7	GND
8	5.0
IC003	
PIN	**VOLT**
1	N/C
2	GND
3	GND
IC004	
PIN	**VOLT**
1	5.0
2	5.0
3	GND
4	5.0
5	5.0
IC401	
PIN	**VOLT**
1	4.5
2	0.3
3	4.5
4	0.3
5	4.5
6	4.5
7	0.0
8	4.5
9	4.5
10	N/C
11	4.4
12	0.0
13	4.5
14	9.0
15	4.4
16	GND
IC404	
PIN	**VOLT**
1	14.6
2	7.0
3	GND
4	7.0
5	5.9
6	0.0
7	GND
8	0.0
9	0.5
10	7.2
11	GND

12	7.0
IC545	
PIN	**VOLT**
1	0.7
2	13.5
3	-12.2
4	-13.3
5	0.2
6	13.8
7	0.7
IC561	
PIN	**VOLT**
1	0.1
2	3.4
3	2.3
4	GND
5	9.2
6	10.2
7	0.1
8	13.5
IC565	
PIN	**VOLT**
1	3.4
2	3.4
3	2.1
4	9.0
5	1.0
6	1.0
7	1.0
8	1.6
9	1.6
10	1.6
11	GND
12	1.6
13	1.6
14	1.6
IC600	
PIN	**VOLT**
1	2.8
2	1.9
3	2.3
4	2.6
5	GND
6	2.3
7	4.6

8	17.5
9	0.0
10	10.6
11	0.0
12	4.9
13	NC
14	163.9
15	153.8
16	158.2
17	NC
18	340.0
IC603	
PIN	**VOLT**
I	12.0
G	GND
O	9.0
IC604	
PIN	**VOLT**
1	133.7
2	N/C
3	2.5
4	11.3
5	GND
IC608	
PIN	**VOLT**
I	11.0
O	5.0
G	GND
IC633	
PIN	**VOLT**
I	9.0
G	GND
O	3.3

All voltages are in V.

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SERVICE MANUAL

BA-6 CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KV-24FS100	*RM-Y173*	*US*	*SCC-S61D-A*
KV-24FS100	*RM-Y173*	*CND*	*SCC-S59D-A*
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KV-25FS100	*RM-Y173*	*LATIN SOUTH*	*SCC-S60K-A*

CORRECTION - 3

SUBJECT: REPLACED A BOARD SCHEMATIC TO CORRECT T603 PIN CONNECTION

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Items

SECTION 5: DIAGRAMS

5-3. BLOCK DIAGRAM AND SCHEMATICS

A Board Schematic (Page 31)

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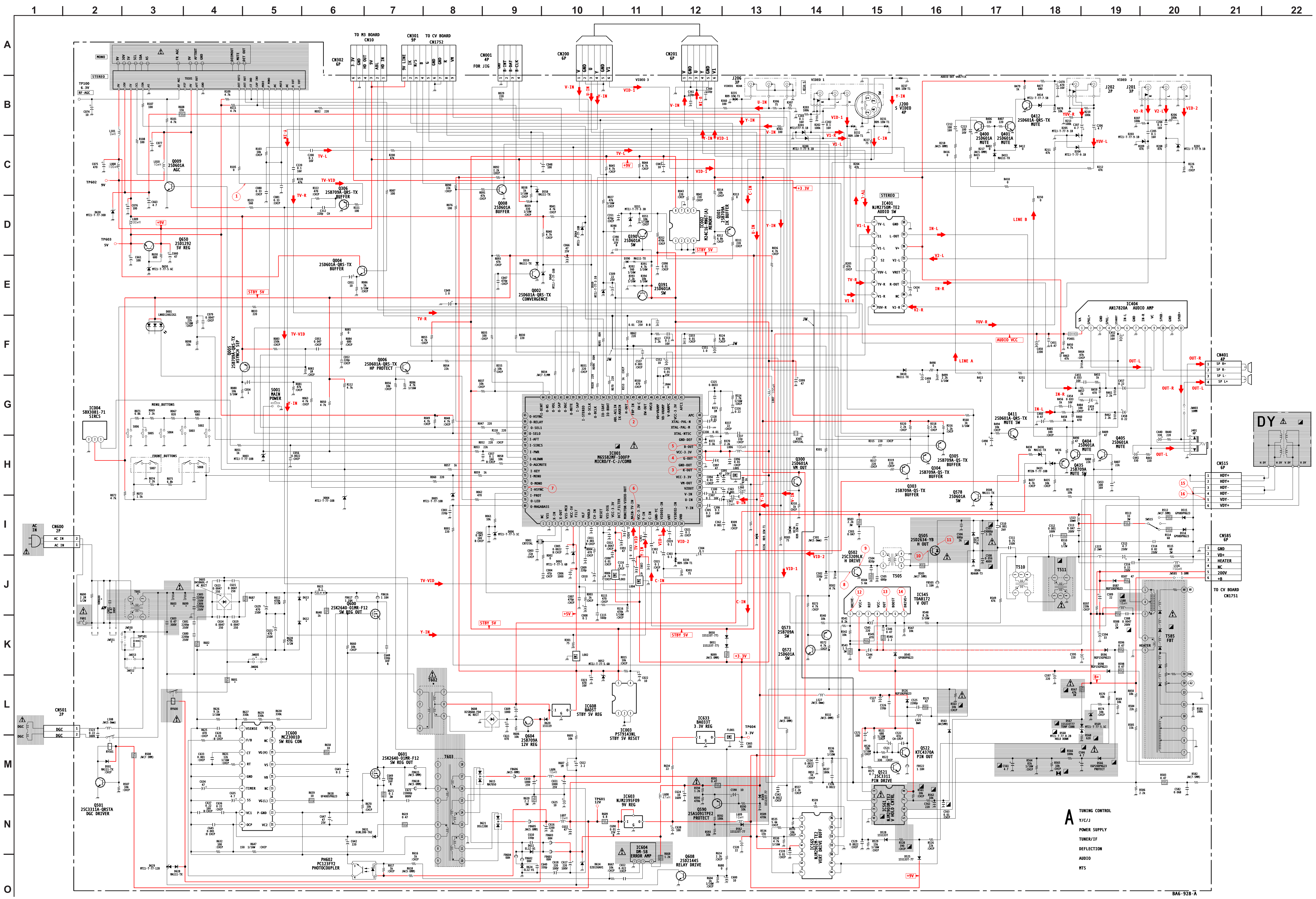
A BOARD SCHEMATIC DIAGRAM



TO M3 BOARD CN10
CN302 6P
CN301 9P TO CV BOARD CN1752
CN001 4P FOR JIG
CN200 6P
CN201 6P
J206 3P
VIDEO 3
VIDEO 1
J200 S VIDEO 4P
VIDEO 2
J202 2P
J201 3P
TU101
MONO
STEREO
TP100 6.3V RF-AGC
Q009 2SD601A AGC
TP602 9V
TP603 5V
Q650 2SD1292 5V REG
Q306 2SB709A-QRS-TX BUFFER
Q004 2SD601A-QRS-TX BUFFER
Q008 2SD601A BUFFER
Q002 2SD601A-QRS-TX CONVERGENCE
Q390 2SD601A SW
Q391 2SD601A SW
IC002 M24C16-MN6T(A) MEMORY
Q301 2SB709A IK BUFFER
IC401 NJM2750M-TE2 AUDIO SW
Q400 2SD601A MUTE
Q401 2SD601A MUTE
Q412 2SD601A-QRS-TX MUTE
IC404 AN17820A AUDIO AMP
CN401 4P
Q005 2SB709A-QRS-TX HSYNCH SEP
Q006 2SD601A-QRS-TX HP PROTECT
S001 MAIN POWER
IC004 SBX3081-71 SIRCS
MENU_BUTTONS
FRONT_BUTTONS
IC001 M65582MF-100FP MICRO/Y-C-J/COMB
Q300 2SD601A VM OUT
Q303 2SB709A-QS-TX BUFFER
Q304 2SB709A-QS-TX BUFFER
Q305 2SB709A-QS-TX BUFFER
Q578 2SD601A SW
Q411 2SD601A-QRS-TX MUTE SW
Q404 2SD601A MUTE
Q405 2SD601A MUTE
Q435 2SB709A MUTE SW
J401 HP
DY
CN515 6P
CN585 6P
TO CV BOARD CN1751
CN600 2P AC IN
T601
Q600 2SK2640-01MR-F12 SW REG OUT
CN501 2P DGC
Q501 2SC3311A-QRSTA DGC DRIVER
RY600
IC600 MCZ3001D SW REG CON
Q601 2SK2640-01MR-F12 SW REG OUT
T602
T603
PH602 PC123FY2 PHOTOCOUPLER
Q604 2SB709A 12V REG
IC608 BA05T STBY 5V REG
IC003 PST9143NL STBY 5V RESET
IC633 BA033T 3.3V REG
IC603 NJM2395F09 9V REG
Q590 2SA1091TPE2 PROTECT
IC604 DM-58 ERROR AMP
Q608 2SD2144S RELAY DRIVE
Q502 2SC3209LK H DRIVE
Q505 2SD2634-YB H OUT
T505
T510
T511
IC545 TDA8172 V OUT
Q573 2SB709A SW
Q572 2SD601A SW
Q522 KTC4370A PIN OUT
Q521 2SC3311 PIN DRIVE
IC561 NJM2903M-TE2 V HOLD CNTRL
IC565 NJM2902M-TE2 VERT DRIVE BUFF
T585 FBT
A
TUNING CONTROL
Y/C/J
POWER SUPPLY
TUNER/IF
DEFLECTION
AUDIO
MTS
BA6-928-A